

MINUTE ITEM

This Calendar Item No. 27
was approved as Minute Item
No. 27 by the State Lands
Commission by a vote of 3
to 0 at its 8-12-91
meeting.

CALENDAR ITEM

A 35

27

S 18

08/12/91
W 40547
PRC 1466
PRC 410
Griggs
Gonzalez

APPROVE WORKOVER OF EXISTING OIL AND GAS WELLS,
STATE OIL AND GAS LEASES PRC 1466 AND PRC 410
VENTURA COUNTY

LESSEE:

Bush Oil Company (Operator)
Attn: Neil Nelson
P. O. Box 1538
Taft, California 93268

ARCO Oil and Gas Company
Attn: Paul Langland
P. O. Box 147
Bakersfield, California 93302

AREA, TYPE LAND AND LOCATION:

State oil and gas lease PRC 1466, issued on August 29, 1955, comprises 1,175 acres of submerged land at the westerly end of Rincon Field, Ventura County, located approximately ten miles north of the City of Ventura. A drilling and production island, Rincon Island, constructed in 1958 by the Lessee, is located approximately 3,000 feet from shore in 45 feet of water. The island is connected to the mainland by a causeway.

State oil and gas lease 410 was issued in April 1949 and consists of 50 acres of partially filled tide and submerged lands in the Rincon area, Ventura County (see Exhibit "A").

PROPOSED PROJECT:

Bush Oil Company, Lessee of State oil and gas leases PRC 1466 and PRC 410, is proposing a drilling program to enhance production of oil and gas from the "A" sand reservoirs in the offshore Rincon area. The project includes sidetracking and deepening 22 existing wells into the AH to AZ sands of the Pico-Repetto

formation. Twenty-one of the wells are located on lease PRC 1466 on Rincon Island. The other well is located on lease PRC 410 about one mile east of Rincon Island. Lease PRC 410 is developed through an existing well onshore on Bush Oil Company property at 5750 West Pacific Coast Highway, north of Highway 101.

AB 884:
09/12/91.

OTHER PERTINENT INFORMATION:

1. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (14 Code Regs. 15025), an Initial Study was prepared by Commission staff. Subsequent to preparation of the Initial Study and modifications to the project based on the result of the Initial Study, a Proposed Negative Declaration EIR ND 544, State Clearinghouse 91031041, was prepared.

The Proposed Negative Declaration was prepared and circulated for public review pursuant to the provisions of the CEQA. A copy of this environmental document is attached as Exhibit "B".

Based upon the information and analysis within the Initial Study, the Proposed Negative Declaration, and comments received during circulation of the environmental documentation, there was no evidence that the project, as proposed, would have a significant effect on the environment (14 Cal. Code Regs. 15074(b)).

Subsequent to the close of the public comment period on April 11, 1991, staff received correspondence on July 10 and 12, 1991 from the Environmental Defense Center (EDC). EDC's comments regarding the environmental process centered on two issues; (1) proper circulation of the environmental document and (2) air quality impacts of the proposed project. These issues are discussed below:

A. Proper circulation of the Proposed Negative Declaration: The document was circulated on March 11, 1991 to the required parties, as determined by the State Clearinghouse, including the two environmental public interest groups which EDC purports, in letters to the Commission, to represent specifically the Citizens to Preserve the Ojai and the Environmental

Coalition of Ventura County. As stated, the comment period for the document ended on April 11, 1991. The EDC letters were received three days before the item was originally scheduled to be considered by the State Lands Commission (July 15, 1991).

B. Air quality: The rig used for the workover project is exempt from the permit requirements of the Ventura County Air Pollution Control District (APCD) under its Rule 23.D.5. Discussions between SLC staff and staff of the Ventura and Santa Barbara County APCDs have revealed that neither county regulates workover rigs because they are considered to be mobile sources and thereby exempt from regulations.

Ventura County is, however, classified as "extreme" non-attainment for ozone and the project's known emissions exceed the thresholds for stationary sources which are regulated. As a result of staff's discussions with the APCDs and the company, Bush Oil proposes to voluntarily offset, i.e., mitigate, the emissions of precursors of ozone, No x and Reactive Organic Compounds (ROC) of the proposed project.

The Bush Oil Company Rincon Island leases presently operate under a Permit to Operate (PTO) issued by the Ventura County APCD for stationary sources. The Ventura County APCD has approved use of Certified Emission Reductions on Permit to Operate No. 0003 for use as mitigation for the specified emissions of the well workover project on Rincon Island and will amend its PTO accordingly.

Staff believes that this is an innovative and mutually beneficial approach to the maintenance and improvement of air quality in Ventura County.

EXHIBITS:

- A. Location Map.
- B. Proposed Negative Declaration ND 544.
- C. Mitigation Monitoring and Reporting Plan.
- D. Environmental Defense Center Correspondence and Staff Response.

IT IS RECOMMENDED THAT THE COMMISSION:

1. CERTIFY THAT A PROPOSED NEGATIVE DECLARATION, EIR ND 544, STATE CLEARINGHOUSE 91031041, WAS PREPARED FOR THIS PROJECT PURSUANT TO THE PROVISIONS OF THE CEQA AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN.
2. ADOPT THE PROPOSED NEGATIVE DECLARATION AND DETERMINE THAT THE PROJECT, AS PROPOSED, WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.
3. ADOPT, PURSUANT TO SECTION 21001.6 OF THE P.R.C., THE MONITORING PROGRAM CONTAINED IN EXHIBIT "C", FOR THE PROJECT TO ENSURE COMPLIANCE WITH THE REQUIRED MITIGATION MEASURES.
4. FIND THAT THIS ACTIVITY IS CONSISTENT WITH THE USE CLASSIFICATION DESIGNATED FOR THE LAND PURSUANT TO P.R.C. 6370 ET. SEQ.
5. APPROVE THE PROJECT, AS DESCRIBED, BY BUSH OIL COMPANY TO WORKOVER 22 OIL AND GAS WELLS UNDER STATE OIL AND GAS LEASES PRC 1466 AND PRC 410.

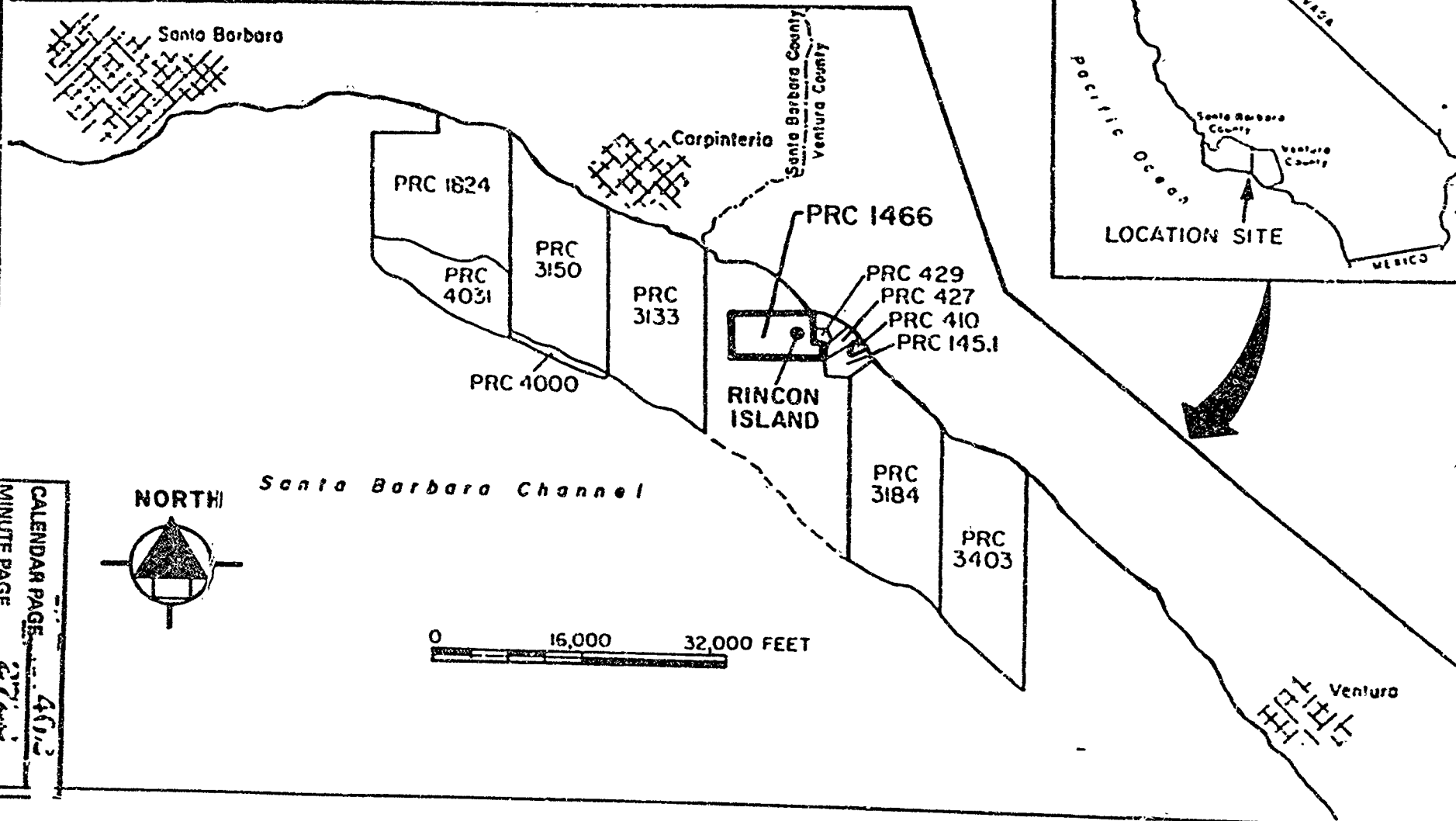
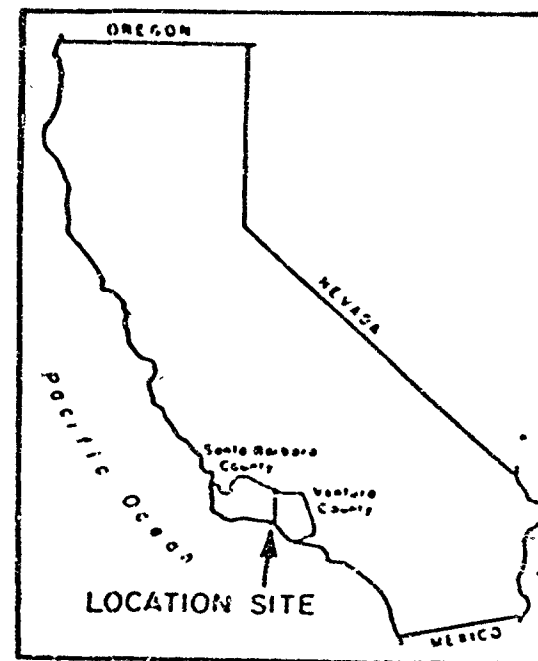
EXHIBIT "A"

WORKOVER PROJECT

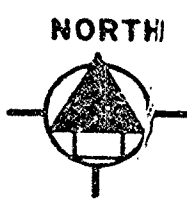
RINCON ISLAND

BUSH OIL CO.

W40547, PRC 1466, 410



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0 16,000 32,000 FEET

STATE LANDS COMMISSION

LEO T. McCARTHY, Lieutenant Governor
GRAY DAVIS, Controller
THOMAS W. HAYES, Director of Finance

EXECUTIVE OFFICE
1807 - 13th Street
Sacramento, CA 95814

CHARLES WARREN
Executive Officer

March 11, 1991
File Ref.: W 40547
EIR ND: 544

NOTICE OF PUBLIC REVIEW OF A NEGATIVE DECLARATION
(SECTION 15073 CFR)

A Negative Declaration has been prepared pursuant to the requirements of the California Environmental Quality Act (Section 21000 et seq., Public Resources Code), the State CEQA guidelines (Section 15000 et seq., Title 14, California Code Regulations), and the State Lands Commission Regulations (Section 2901 et seq., Title 2, California Code Regulations) for a project currently being processed by the staff of the State Lands Commission.

The document is attached for your review. Comments should be addressed to the State Lands Commission office shown above, with attention to the undersigned. All comments must be received by April 11, 1991.

Should you have any questions or need additional information, please call the undersigned at (916) 322-0354.



MARY GRIGGS
Division of Environmental
Planning and Management

Attachment

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STATE LANDS COMMISSION

LEO T. McCARTHY, *Lieutenant Governor*
 GRAY DAVIS, *Controller*
 THOMAS W. HAYES, *Director of Finance*

PETE WILSON, *Governor*

EXECUTIVE OFFICE
 1807 - 13th Street
 Sacramento, CA 95814

CHARLES WARREN
 Executive Officer

PROPOSED NEGATIVE DECLARATION

EIR ND: 544
 File: W 40547
 SCH No.: 91031041

Project Title: Bush Oil Company Workover Project
 Proponent: Bush Oil Company
 Project Location: Rincon Island and 5750 Pacific Coast Highway, Ventura County.
 Project Description: Workover of 21 existing oil and gas wells on Rincon Island and one at 5750 Pacific Coast Highway.
 Contact Person: Mary Griggs Telephone: 916/322-0354

This document is prepared pursuant to the requirements of the California Environmental Quality Act (Section 21000 et seq., Public Resources Code), the State CEQA Guidelines (Section 15000 et seq., Title 14, California Code Regulations), and the State Lands Commission regulations (Section 2901 et seq., Title 2, California Code Regulations).

Based upon the attached Initial Study, it has been found that:

this project will not have a significant effect on the environment.

mitigation measures included in the project will avoid potentially significant effects.

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ENVIRONMENTAL IMPACT ASSESSMENT CHECKLIST - PART II

Form 13.29 (7/82)

File Ref.: WP 1466, WP 410

I. BACKGROUND INFORMATION

- A. Applicant: Bush Oil Company
P.O. Box 1538
Taft, CA 93268
- B. Checklist Date: 9 / 21 / 90
- C. Contact Person: Mary Griggs
 Telephone: (916) 322-0354
- D. Purpose: Rehabilitate and redrill 22 existing oil and gas wells in order to drain "A" sands.
- E. Location: Rincon Island and 5750 Pacific Coast Highway, Ventura County.
- F. Description: Workover of 21 existing oil and gas wells on Rincon Island, and one at 5750 Pacific Coast Highway.
- G. Persons Contacted: _____

II. ENVIRONMENTAL IMPACTS. (Explain all "yes" and "maybe" answers)

A. Earth Will the proposal result in:	Yes	Maybe	No
1. Unstable earth conditions or changes in geologic substructures? . . .	—	—	X
2. Disruptions, displacements, compaction, or overcovering of the soil? . . .	—	—	X
3. Change in topography or ground surface relief features?	—	—	X
4. The destruction, covering, or modification of any unique geologic or physical features?	—	—	X
5. Any increase in wind or water erosion of soils, either on or off the site?	—	—	X
6. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet, or estuary?	—	—	X
7. Exposure of all people or property to geologic hazards such as earthquakes, landslides, or similar hazards?	—	—	X

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	Yes	Maybe	No
B Air Will the proposal result in:			
1 Substantial air emissions or deterioration of ambient air quality?			X
2 The creation of objectionable odors?			X
3 Alteration of air movement, moisture or temperature or any change in climate, either locally or regionally?			X
C Water Will the proposal result in:			
1 Changes in the currents or the course or direction of water movements, in either marine or fresh waters?			X
2 Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?			X
3 Alterations to the course or flow of flood waters?			X
4 Change in the amount of surface water in any water body?			X
5 Discharge into surface waters or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?			X
6 Alteration of the direction or rate of flow of ground waters?			X
7 Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?			X
8 Substantial reduction in the amount of water otherwise available for public water supplies?		X	
9 Exposure of people or property to water-related hazards such as flooding or tidal waves?			X
10 Significant changes in the temperature, flow or chemical content of surface thermal springs?			X
D Plant Life Will the proposal result in:			
1 Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)?			X
2 Reduction of the numbers of any unique, rare or endangered species of plants?			X
3 Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?			X
4 Reduction in acreage of any agricultural crop?			X
E Animal Life Will the proposal result in:			
1 Change in the diversity of species or numbers of any species of animals (birds, and animals including reptiles, fish and shellfish, benthic organisms, or insects)?			X
2 Reduction of the numbers of any unique, rare or endangered species of animals?			X
3 Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?			X
4 Deterioration to existing fish or wildlife habitat?			X
F Noise Will the proposal result in:			
1 Increase in existing noise levels?			X
2 Exposure of people to severe noise levels?			X
G Light and Glare Will the proposal result in:			
1 The production of new light or glare?			X
H Land Use Will the proposal result in:			
1 A substantial alteration of the present or planned land use of an area?			X
I Natural Resources Will the proposal result in:			
1 Increase in the rate of use of any natural resources?			X
2 Substantial depletion of any nonrenewable resources?			X

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J. Risk of Upset Does the proposal result in

1 A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals, or radiation) in the event of an accident or upset conditions? Yes Maybe No

2 Possible interference with emergency response plan or an emergency evacuation plan? Yes Maybe No

K. Population Will the proposal result in:

1 The alteration, distribution, density, or growth rate of the human population of the area? Yes Maybe No

L. Housing Will the proposal result in:

1 Affecting existing housing, or create a demand for additional housing? Yes Maybe No

M. Transportation/Circulation Will the proposal result in:

1 Generation of substantial additional vehicular movement? Yes Maybe No

2 Affecting existing parking facilities, or create a demand for new parking? Yes Maybe No

3 Substantial impact upon existing transportation systems? Yes Maybe No

4 Alterations to present patterns of circulation or movement of people and/or goods? Yes Maybe No

5 Alterations to waterborne, rail, or air traffic? Yes Maybe No

6 Increase in traffic hazards to motor vehicles, bicyclists, or pedestrians? Yes Maybe No

N. Public Services Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:

1 Fire protection? Yes Maybe No

2 Police protection? Yes Maybe No

3 Schools? Yes Maybe No

4 Parks and other recreational facilities? Yes Maybe No

5 Maintenance of public facilities, including roads? Yes Maybe No

6 Other governmental services? Yes Maybe No

O. Energy Will the proposal result in:

1 Use of substantial amounts of fuel or energy? Yes Maybe No

2 Substantial increase in demand upon existing sources of energy, or require the development of new sources? Yes Maybe No

P. Utilities Will the proposal result in a need for new systems, or substantial alterations to the following utilities:

1 Power or natural gas? Yes Maybe No

2 Communication systems? Yes Maybe No

3 Water? Yes Maybe No

4 Sewer or septic tanks? Yes Maybe No

5 Storm water drainage? Yes Maybe No

6 Solid waste and disposal? Yes Maybe No

Q. Human Health Will the proposal result in:

1 Creation of any health hazard or potential health hazard (excluding mental health)? Yes Maybe No

2 Exposure of people to potential health hazards? Yes Maybe No

R. Aesthetics Will the proposal result in:

1 The obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view? Yes Maybe No

S. Recreation Will the proposal result in:

1 An impact upon the quality or quantity of existing recreational opportunities? Yes Maybe No

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T Cultural Resources.

- | | Yes | Maybe | No |
|---|-----|-------|----|
| 1. Will the proposal result in the alteration of or the destruction of a prehistoric or historic archeological site? | | | X |
| 2. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object? | | | X |
| 3. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values? | | | X |
| 4. Will the proposal restrict existing religious or sacred uses within the potential impact area? | | | X |

U *Monetary Findings of Significance.*

- | | | | |
|---|--|--|---|
| 1. Does the project have the potential to degrade the quality of the environment, reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? | | | X |
| 2. Does the project have the potential to achieve short-term to the disadvantage of long-term, environmental goals? | | | X |
| 3. Does the project have impacts which are individually limited, but cumulatively considerable? | | | X |
| 4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | | | X |

III. DISCUSSION OF ENVIRONMENTAL EVALUATION (See Comments Attached)

Please refer to the pages as indicated for those items requiring further discussion:

- II.A.7. pp. 9-12 and p. 34
- II.C.7. pp. 16-17 and p. 36
- II.G.1. pp. 19-22 and p. 36
- II.I. 2 p. 22
- II.J.1. p. 22 and pp. 34-38

IV. PRELIMINARY DETERMINATION

On the basis of this initial evaluation

- I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared.
- I find the proposed project MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT is required.

Date: 01 / 16 / 91

For the State Lands Commission
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STATE OF CALIFORNIA
STATE LANDS COMMISSION
INITIAL STUDY FOR A REMEDIAL AND
WORKOVER PROJECT
ON
STATE OIL AND GAS LEASES
PRC 1466 AND PRC 410
OFFSHORE PUNTA GORDA
VENTURA COUNTY

1. THE PROJECT AND ITS LOCATION

Bush Oil Company, lessee of State Oil and Gas Leases PRC 1466 and PRC 410, is planning a project to enhance production of oil and gas from the "A" sand reservoirs in the offshore Rincon area. The enhancement is planned by sidetracking and deepening 22 existing wells into the AH to AZ sands. The location of the project in the area offshore Punta Gorda in Ventura County is shown in Exhibit A.

The plan provides for sidetracking and deepening twenty-two specific wells as listed in Table 1. Twenty-one of the specific wells planned for deepening are located in Lease PRC 1466 on Rincon Island, which was constructed in 1958 and is located at the end of a 3000 feet long trestle extending southward from shore at Punta Gorda. Sidetracking and deepening of these wells into the AS sand are planned.

One of the specific wells is planned for sidetracking and deepening into lease PRC 410 about one mile east of Rincon Island. Access to lease PRC 410 is made through an existing well on the Bush Oil Company property at 5750 West Pacific Coast Highway located north of Highway 101 and South of the old Rincon Highway between the Fire Station at the Seacliff off ramp and the underpass to the Mobil Piers. The well in Lease PRC 410 is planned for deepening into the AZ sands.

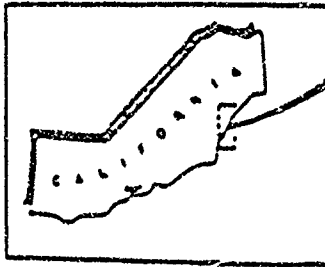
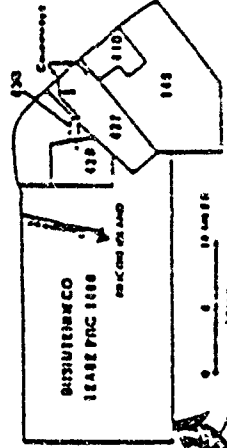
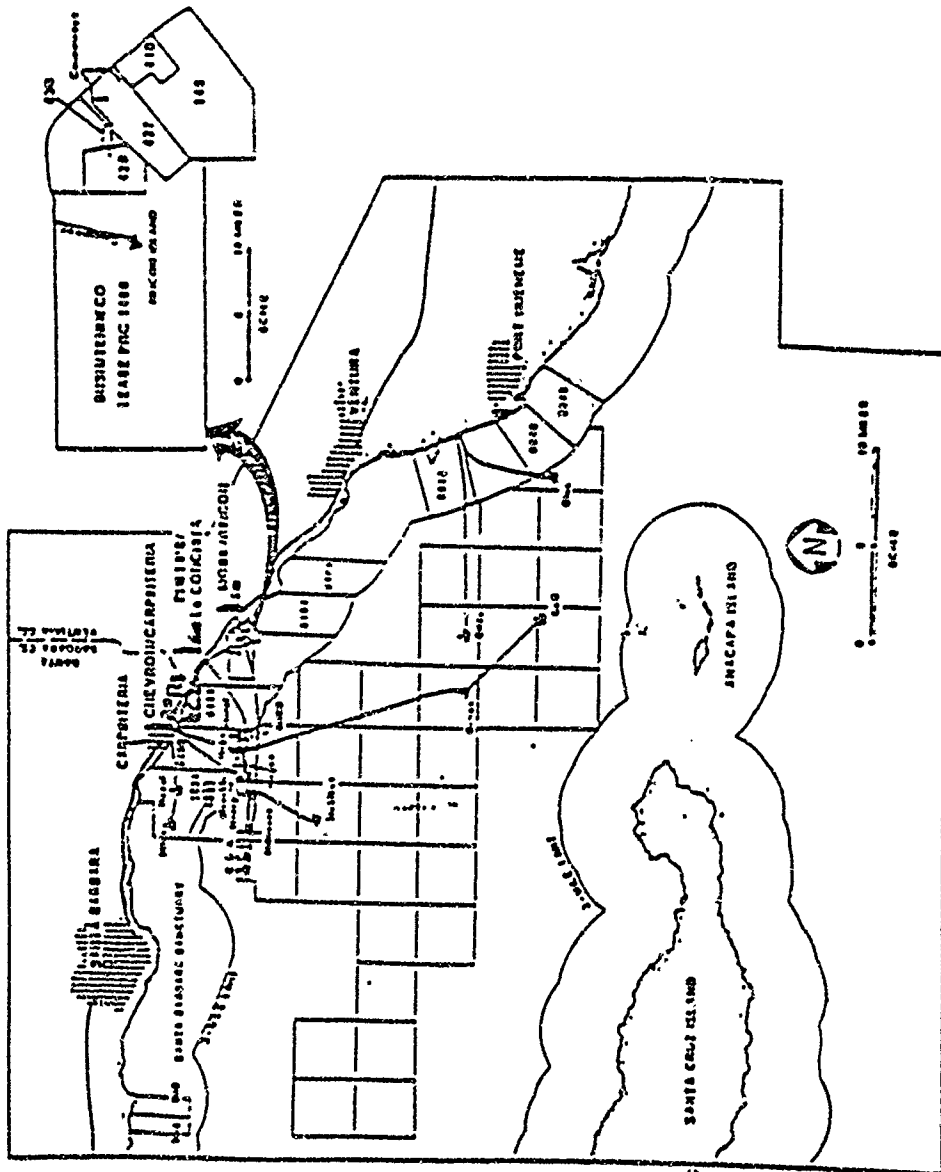
The general extent of redrilling will vary from about 1600 feet to 3200 feet reaching a maximum depth of about 4800 feet.

2. PURPOSE OF THE PROJECT AND EXPECTED RECOVERY

The purpose of the project is to recover additional hydrocarbon reserves in the AH to AZ sands within leases PRC 1466 and PRC 410. The wellbores currently available from the "A" sand reservoirs in the offshore Rincon area are not located in the most

EXHIBIT A

PROJECT AREA



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TABLE 1

ESTIMATED RESERVES TO BE RECOVERED
IN RINCON REDRILL PROGRAM

WELL	EXPECTED NET PAY	ESTIMATED RECOVERABLE RESERVES	
		OIL	GAS
1466 - 9R	195'	164M BbLS	33MMCF
10	226'	190M BbLS	38MMCF
17	248'	280M BbLS	42MMCF
19	250'	210M BbLS	42MMCF
21R	250'	210M BbLS	42MMCF
22	225'	189M BbLS	38MMCF
27	220'	185M BbLS	37MMCF
28	260'	218M BbLS	44MMCF
40	215'	183M BbLS	37MMCF
42	240'	202M BbLS	40MMCF
44	230'	193M BbLS	39MMCF
45	225'	189M BbLS	38MMCF
46	190'	160M BbLS	32MMCF
48	195'	164M BbLS	33MMCF
54	260'	218M BbLS	44MMCF
57	220'	185M BbLS	37MMCF
60	190'	160M BbLS	32MMCF
61	180'	151M BbLS	30MMCF
62	190'	160M BbLS	32MMCF
63	228'	192M BbLS	38MMCF
66	215'	181M BbLS	36MMCF
410-8	205'	172M BbLS	34MMCF
		4,084M BbLS	818MMCF

* Assume 1400 BAF OOIP
3 Acre Drainage Area
20% Ultimate Recovery

strategic locations and are generally not drilled deep enough to recover the hydrocarbons that are known to exist in the AH through AZ sands. Sidetracking of the existing wells to reach more strategic areas and deepening into the sands containing the additional known reservoirs are therefore necessary to fulfill the purpose of the project.

Expected recovery of oil from 22 specific well workovers is 4,084,000 barrels as shown in Table 1. The anticipated recovery is thus about 185,600 barrels of oil per well workover.

Natural gas recovery is anticipated at the Gas-Oil-Ratio of about 200 cubic feet per barrel. Thus about 818 million cubic feet of gas is expected from the 22 specific workovers listed in Table 1. Commercial production from the project is expected to continue over a 10-year period with approximately 10% depletion per year.

3. DESCRIPTION OF THE PROPOSED WORK

Bush Oil Company plans to conduct the remedial and workover project on one well at a time sequentially until all the work is completed. The average workover time per well is estimated to be 10 days, and completion of the entire project is expected within one year. Work on each well is planned for daylight hours only except when a hole is open, during which time the work is planned to continue on a 24 hour per day basis in order to ensure that critical operations are under constant attendance of the work crew. The normal workover crew will consist of 5 men.

A conventional drive-up type, mobile, well-servicing rig with conventional mud motors, and survey and directional equipment will be used for the workovers. A Diesel engine will power the rig. The mobile rig will be moved over each existing well for re-work. The strata already drained in the well will be plugged; then sidetracking and deepening will be accomplished using a 7 3/4 inch bit. The extent of the sidetracking and redrilling will vary between about 1600 feet and 3200 feet for each of the 22 wells, averaging about 2200 feet per well. Each hole will be cased with conventional pipe and cemented as necessary.

A high-quality, water-based mud will be used for the deepening. Produced water will be used for the mud mixture; no additional water from municipal sources will be required for the mud. The mud will be contained in interconnected steel tank mud pits, and the same mud used on the first well workover will be used on the following sequential workovers. Make-up mud will be added as necessary. As the mobile rig is moved between Rincon Island and the Bush Oil Company property ashore, the mud will be transported between the sites also in order to minimize the total quantity of mud needed for the project.

Cuttings will be separated from the mud mixture, temporarily stored in sand bins, and then hauled to approved Class II-I or Class I dumpsites as non-hazardous waste. Upon completion of the entire project, the mud will also be transported in a vacuum truck to a similar dumpsite as non-hazardous waste. A total of about 700 cubic yards of mud and cuttings is expected to be generated for disposal. As production is enhanced during the project, the oil, water, and gas will be processed through the existing Bush Oil Company facilities on Rincon Island, and on the Bush Oil Company property ashore. The existing production facilities are used to separate the produced fluid from the wells into crude oil, water, and natural gas streams. The produced fluid flows to a master trap in which separation into oil, water, and gas occurs. The stream containing primarily oil flows from the master trap to the wash tank and thence to the shipping tank. It is then sold to the Mobil Oil Company and is transported through an existing pipeline to Mobil's facilities north of Rincon Island, where it is treated further into pipeline-quality oil. Water from the master trap flows to a water tank where it is re-injected into the producing formation. All natural gas separated at the master trap, wash tank, and shipping tank is collected and sold to Southern California Gas Company through an existing 6 inch pipeline.

No new facilities will be necessary to carry out the project, and none will be constructed for the project. The existing facilities on and offshore are also sufficient for reception and temporary storage of all materials and equipment needed for the project.

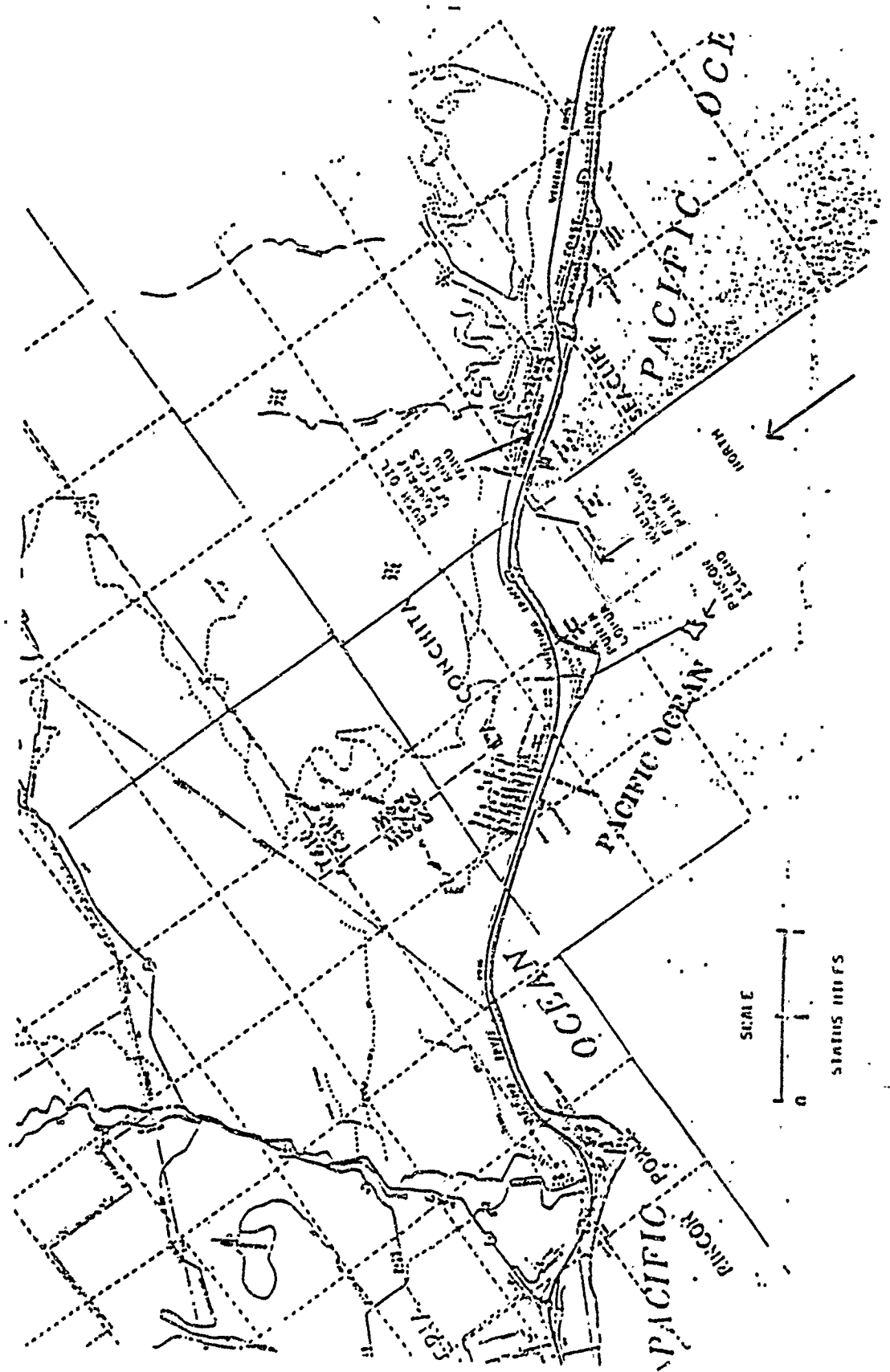
Upon completion of the project the mobile rig, all the equipment used, mud, and cuttings will be removed from the project area.

4. PRESENT ENVIRONMENT

A. GENERAL ENVIRONMENT

The local vicinity of the project work is shown in Exhibit B. The local environment within about 3 miles of the project area includes the coastal communities and beaches between Rincon Beach State Park and Hobson County Park, the offshore oil development facilities within the leases PRC 1466, 429, 427, 410, and 145 as shown in Exhibit A, onshore oil wells and oil treatment facilities north of Highway 101 roughly between Punta Gorda and the Seacliff offramp to the old Rincon Highway or Highway 1, a coastal bluff rising about 500 feet above the sea and paralleling the coast within about 1500 feet of the shore, and the Pacific Ocean generally south of the proposed remedial and workover project. Highway 101 and a single track railroad parallel the coast through the local area. To the north of the bluff lie sparsely occupied ranches and an area of oil wells east of Los Sauces Creek. The beaches within 3 miles of the project area are popular surfing and swimming

EXHIBIT B
PROJECT LOCAL VICINITY



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areas. The land between Highway 101 and old Highway 1 southeast of the Seacliff offramp is used for agriculture.

Rincon Island in State Lease PRC 1466 is a man-made, sand-filled core surrounded by protective outer rock. The island covers approximately six acres on the ocean floor and 2.5 acres at sea level. It provides a useful work area of about one acre, and it is connected to Punta Gorda ashore by a 3000 foot long trestle. The residences nearest to the project are on Punta Gorda, and the Cliff Hotel at Mussel Shoal is also located on Punta Gorda. The only access to Rincon Island from land is from Highway 101 through the Punta Gorda beach community. The island and the trestle connecting the island to shore are visible to residents of the beach homes and hotel, some residents of La Conchita, motorists traveling on Highway 101, and from vantage points along the local coastline. The trestle is the structure that initially attracts viewer attention because of the distance it extends across the ocean surface. The trestle directs viewer attention toward the island, which appears as a relatively small rocky structure visually dominated by tall, scattered palm trees. These palm trees provide partial visual screening for the oil production facilities, which are situated within the depressed interior portion of the island. The existing production rig, when the mast is elevated, extends above the height of the palm trees and is visible from most local onshore vantage points.

The Bush Oil Company offices and yard lie north of Highway 101, and they are visible from Highway 101 but not from the nearby beach communities since the yard lies in an area lower than the Highway.

B. GEOLOGICAL ENVIRONMENT

Rincon Island and the rest of the project area are located on the modern wave-cut bench which extends inland past U.S. Highway 101 to the base of the coastal bluff. The face of the bluff is about 500 feet in height, and an elevated coastal terrace extends inland beyond its edge.

Surficial sediments in the area include scattered recent alluvial, colluvial, and beach material and Pleistocene terrace deposits which cap the elevated coastal terrace. These surficial deposits are unconformably underlain by tilted beds of the Pliocene Pico Formation which are well exposed in the face of the bluff. These beds are chiefly composed of silt/stone and conglomerate. Underlying the Pico Formation are the Pliocene Rapetto Formation (conglomerate, sandstone, and silty shale), the upper Miocene Santa Margarita Formation (massive diatomaceous mudstone), and the middle Miocene Monterey Formation (siliceous shale). Beneath the Monterey Formation is a thick sequence of lower Miocene, Oligocene, Eocene, and pre-

Tertiary sedimentary rocks which rest on a basement of crystalline or Franciscan sedimentary rocks.

Rincon Island and the project area are located slightly north of the axis of the Rincon anticline, part of the trend that includes the Rincon, Carpinteria offshore, and Dos Cuadras oil fields. In the immediate vicinity of the project area, the Rincon anticline is cut by several subsurface faults, including the Rincon field fault. Most of these faults do not extend to the surface. Several east-west trending surface or near-surface faults have been mapped in the general area. These are discussed in the following section.

5. ENVIRONMENTAL IMPACT OF THE PROPOSED PROJECT

A. EARTH

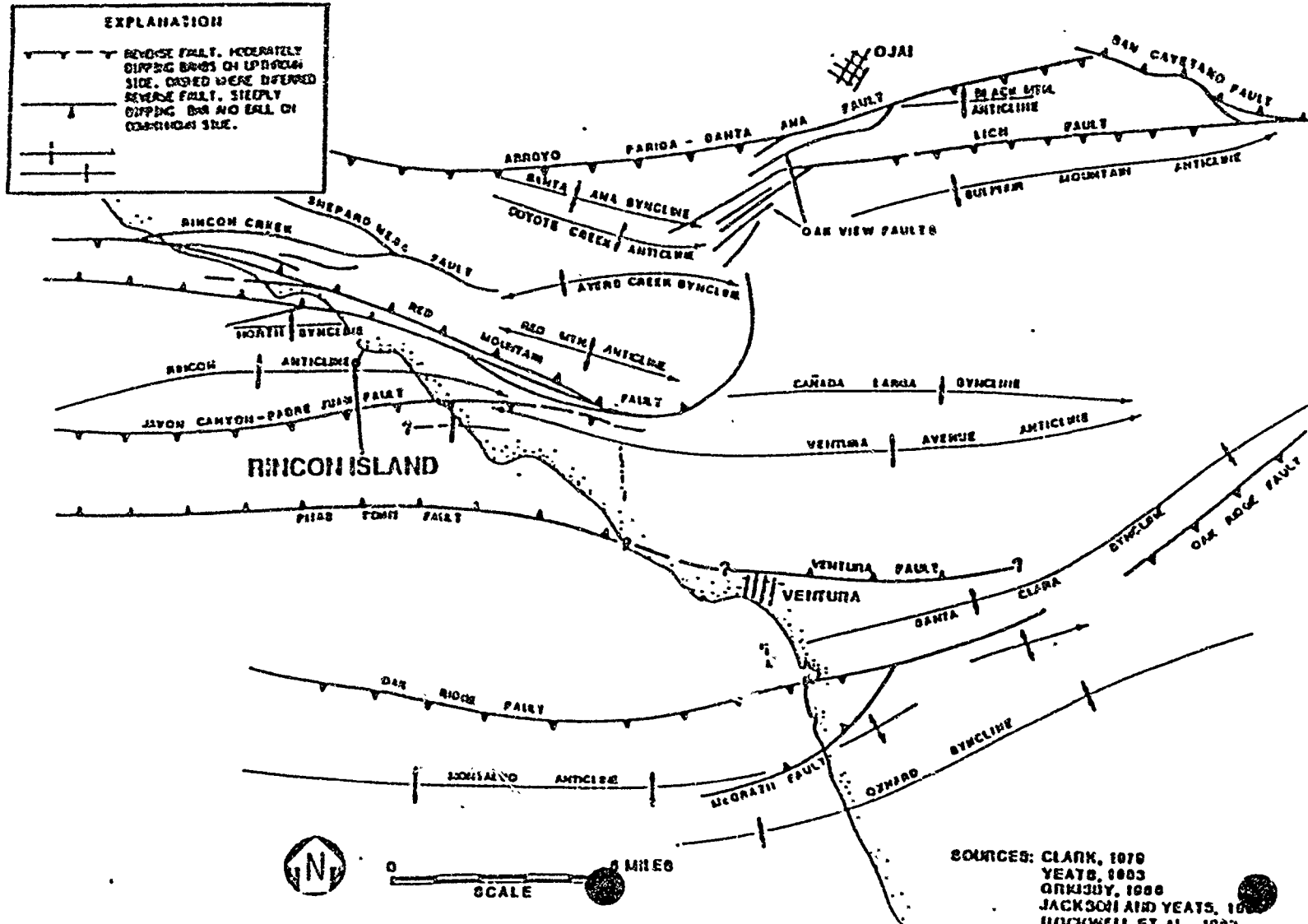
Rincon Island is a man-made structure that was built specifically to accommodate facilities for well drilling and oil and gas production. The proposed project would involve no changes to the island other than the introduction of temporary equipment within the production area. Consequently, there would be no changes in existing topography, soils, wind or water erosion, unique geologic features, siltation, or beach sand transport processes. The well reworked ashore on the Bush Oil Company property would also cause no changes to these features of the environment.

The proposed project facilities would be subject to potential adverse effects of various geologic phenomena, including earthquake ground motion, fault rupture, subsidence, and tsunamis. These are briefly discussed below.

Earthquake Ground Motion: The major faults in the vicinity of Rincon Island are predominantly east-west trending reverse faults as illustrated in Exhibit C. The principal faults or fault zones thought to be seismically active and identified in the Rincon Island area are the Arroyo Parida - Santa Ana, the Red Mountain, the Pitas Point, and the Oak Ridge faults. The Arroyo Parida - Santa Ana and the Red Mountain faults are located approximately 4 1/2 and 1 mile northeast of the project area, respectively. The Pitas Point and the Oak Ridge faults are located approximately 3 and 7 1/2 miles south of the project area, respectively.

Instrumentally recorded seismicity in the Rincon Island region from 1902 to 1985 is shown on Exhibit D. It can be seen from this exhibit that seismic activity has occurred in a diffuse pattern throughout the region as well as in a few distinct clusters.

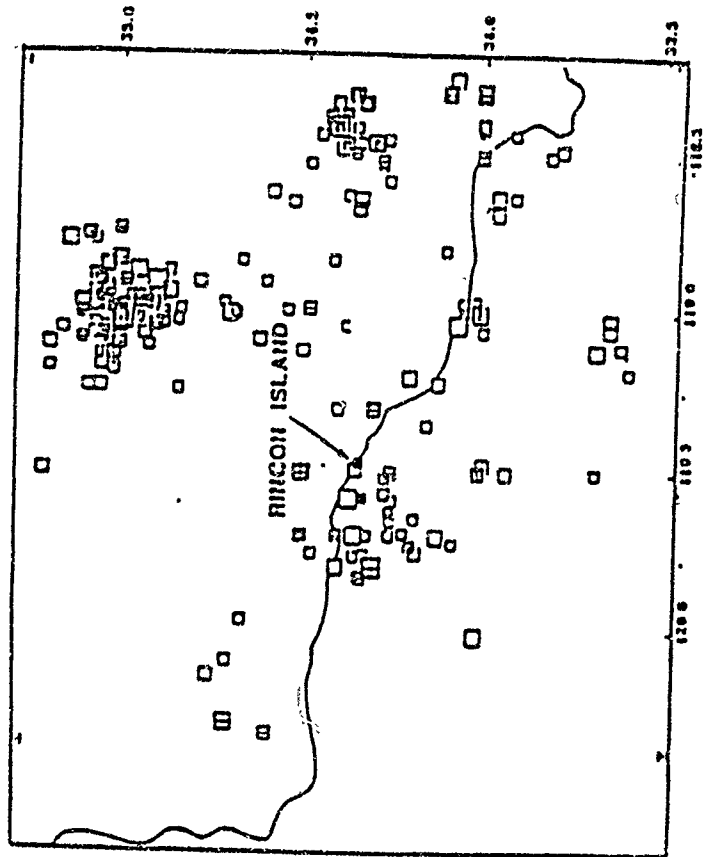
EXHIBIT C
REGIONAL TECTONIC MAP



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EXHIBIT D
 HISTORIC SEISMICITY OF SITE REGION
 JULY 1902 - APRIL 1968



EXPLANATION
 MAGNITUDE
 1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 MULTIPLE SQUARES OF SAME MAGNITUDE
 AT SAME LOCATION

Historically, the eastern Santa Barbara Channel has experienced a moderate level of seismicity. Much of this seismicity occurred as an earthquake swarm in 1958. Other moderate to large events occurred in the offshore Santa Barbara area in 1925, 1941, and 1978. Several other moderate magnitude events have occurred in the vicinity of the northern Channel Islands. Studies of earthquake focal mechanisms reveals that most events within the channel can be associated with the east-west trending reverse or left-slip faults.

Some level of earthquake ground shaking during the year-long project and during-the 10 years of expected production are probable. Proper adherence to applicable State Lands Commission (SLC) and Division of Oil and Gas (DOG) regulations, as described in Section 7, would minimize the potential for significant environmental effects to occur as a result of the occurrence of ground shaking.

Fault Rupture: It is considered unlikely that any of the deepened well boreholes would penetrate the plain of one of the subsurface faults; however, should a fault experience movement that would damage well casing, proper adherence to applicable SLC and DOG regulations, as described in Section 7, would minimize the potential for significant environmental effects to occur as a result.

Subsidence: As production is enhanced during and after the remedial work, removal of fluids could potentially result in ground surface subsidence. Based on field history, occurrence of subsidence is considered unlikely. However, should it occur, SLC and DOG would be notified so that any appropriate mitigative measure could be instituted. Such mitigation typically consists of a program of controlled fluid injection.

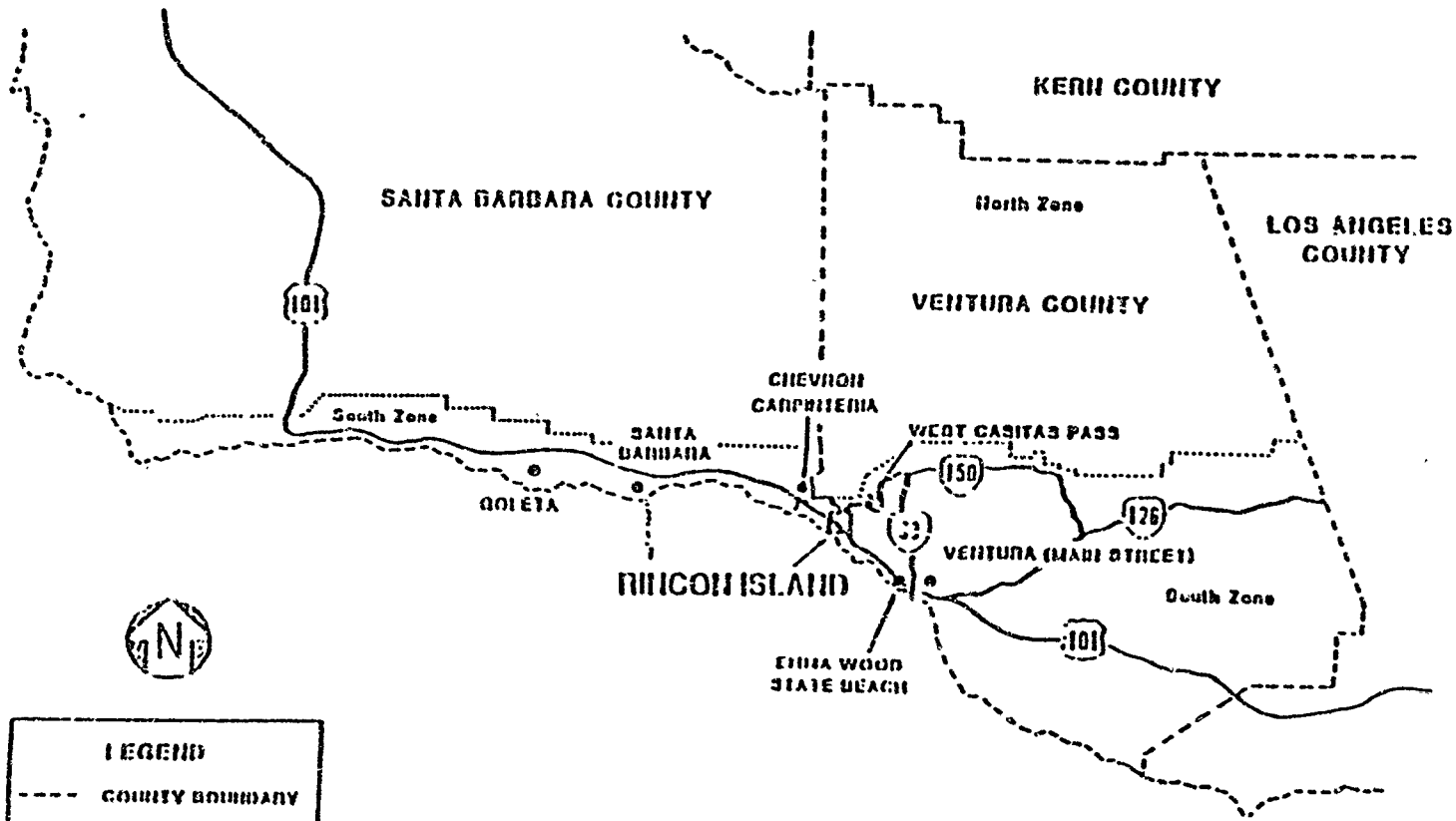
Tsunami: It is highly unlikely that Rincon Island would experience a tsunami during the lifetime of the proposed wells. Adherence to applicable SLC and DOG regulations, as described in Section 7, should ensure against significant damage occurring in the event of a tsunami.

B. AIR

The proposed project is located in Ventura County's Ojai Valley Airshed. The airshed is in the south zone of Ventura County which is considered to be a non-attainment area for ozone (O3). The area is considered in attainment with respect to other pollutants. This airshed is currently designated as a non-growth area for Ventura County Air Pollution Control District (VCAPCD) planning purposes. The proposed project area is located near the southern portion of the South Coast region of Santa Barbara County (Region 1). This region, known as the Air Quality Management Area (AQMA) for Santa

EXHIBIT E
AIR MONITORING SITES LOCATED NEAR PROJECTED AREA

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LEGEND
 --- COUNTY BOUNDARY
 • MONITORING SITE
 — MAJOR HIGHWAYS

TABLE 2
MAXIMUM MEASURED POLLUTANT CONCENTRATIONS DURING 1983-1986 IN THE
SOUTHERN HALF OF THE SANTA BARBARA COUNTY SOUTH COAST
AREA AND THE SOUTH ZONE OF VENTURA COUNTY

POLLUTANT/ AVERAGEING TIME	SANTA BARBARA	WEST CAPITAN PASS	OJAI	AMBIENT AIR		QUALITY STANDARDS	
				EMMA WOOD STATE BEACH	EL RIO	NATIONAL	CALIFORNIA
O ₃ (ppm) 1-hour	0.16	0.16	0.16	0.10	0.10	0.12	0.09 (b)
NO ₂ (ppm) 1-hour	0.16	0.08	-	0.13	0.13	H/A	0.25
Annual	0.019	0.031	0.013	0.017	(0.037) (a)	0.05	H/A
CO (ppm) 1-hour	18	-(c)	-	-	6	35	20
8-hour	8.6	-	-	-	3.4	9	9
SO ₂ (ppm) 1-hour	0.04	-	-	-	-	H/A	0.25
24-hour	0.01	0.04	-	-	-	0.14	0.05
Annual	0.003	-	-	-	-	0.03	H/A
Pb ₁₀ (ug/m ³) 24-hour	-	-	66	-	64	150	100
Annual	-	-	30.9	-	33.5	-	50
Pb (ug/m ³) 30-day Quarterly	0.18 0.14	-	-	-	-	H/A	1.5
SO _x (ug/m ³) 24-hour	15.0	-	-	-	-	1.5 ug/m ³	H/A
						H/A	25 ug/m ³

(a) Values in parentheses are valid, but data set is incomplete in that insufficient number of data points were collected to meet EPA and/or ARB criteria for representativeness.

(b) On August 1, 1988, California Air Resources Board lowered the standard to 0.09 ppm. The previous standard was 0.10 ppm.

(c) Dashes indicate that pollutant is not measured at that particular site.

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TABLE 3
WORKOVER RIG EMISSIONS^a

<u>POLLUTANT</u>	<u>EMISSION FACTOR^b (g/hp-hr)</u>	<u>lb/hr^c</u>	<u>tons/well</u>	<u>TOTAL TONS (22 wells)</u>
Nitrogen Oxides	14	7.6	0.48	10.6
Sulfur Dioxide	0.93	0.5	0.03	0.7
Carbon Monoxide	3.03	1.6	0.10	2.2
Particulate Matter	1.0	0.5	0.03	0.7

- a. Emissions based on a 350 hp engine operating at an average load of 70 percent for 128 hours per well.
- b. Emission factors are from the EPA publication - Compilation of Air Pollutant Emission Factors (AP-42).
- c. 1 lb = 453.6 grams

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TABLE 3a
MUD PUMP EMISSIONS^a

<u>POLLUTANT</u>	<u>EMISSION FACTOR^b (g/hp-hr)</u>	<u>lb/hr^c</u>	<u>tong/well</u>	<u>TOTAL TONS (22 wells)</u>
Nitrogen Oxides	14	8.6	0.14	3.0
Sulfur Dioxide	0.93	0.6	0.01	0.2
Carbon Monoxide	3.03	1.9	0.03	0.7
Particulate Matter	1.0	0.6	0.01	0.2

a. Emissions based on a 400 hp engine operating at an average load of 70 percent for 32 hours per well (25% of workover rig operating time).

b. Emission factors are from the EPA publication - Compilation of Air Pollutant Emission Factors (AP-42).

c. 1 lb = 453.6 grams

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Barbara County, is currently classified as a non-attainment area for ozone (O₃). The South Coast Region is in attainment with National Ambient Air Quality Standards (NAAQS) for all other criteria pollutants.

The air quality monitoring network in the project region consists of six monitoring stations located in Ventura and Santa Barbara Counties (Exhibit E). The sites are located at: (1) Ventura Main Street, 14 miles southeast of the project site; (2) Emma Wood State Beach, 13 miles southeast of the project site; (3) West Casitas Pass, 4 1/2 miles northeast of the project site; (4) Chevron Carpenteria, 4 1/2 miles northwest of the project site; (5) Santa Barbara Canon Perdido Street, 14 miles northwest of the project site; and, (6) Goleta, 22 miles northwest of the project site. Maximum concentrations of pollutants measured in the project region at these monitoring stations are presented in Table 2. For comparison, NAAQS and California Ambient Air Quality Standards (CAAQS) are also shown in Table 2.

During the remedial and workover project, a 350 horsepower Detroit Diesel mobile workover rig would be used. Work on each of the 22 wells will take approximately 10 days. Work will be conducted during daylight hours only (10 hours per day) except when the hole is open (about 2 days per well) when work will continue 24 hours per day. Thus, each well will require about 128 rig hours. Air pollutant emissions estimates are shown in Table 3 and 3a.

Produced fluids would be commingled with existing Bush Oil Company production. Fluids would be processed using existing treating facilities; no new facilities would be added. Produced crude oil and natural gas would be transported via existing pipeline distribution systems.

The principal sources of possible emission increases during the enhanced production phase would be hydrocarbon tankage and equipment seals. Fugitive hydrocarbon emissions from tankage are not anticipated because all hydrocarbon vapors from tankage are collected and used onsite as fuel or sold offsite. Existing fugitive hydrocarbon emissions from equipment seals would not change as a result of additional production. In summary, enhanced production from the AH to AZ sands is not expected to increase existing emissions from production facilities, and therefore would not result in any significant impacts on air quality.

The Mobil facility is permitted to handle 1.5 million barrels of oil per month and they are currently handling approximately 422,000 barrels per month. they will not need to modify their current Ventura County APCD permit in order to process this additional oil.

The proposed workover will involve deepening the wells within the known

reservoir. No new zones will be penetrated. since no H₂S has been detected in any wells currently producing on the Island, Bush does not expect to encounter any in these wells.

Vehicular traffic associated with the proposed workovers will be the equivalent of normal well maintenance activity and will therefore no result in any appreciable increase in emissions. A single crew truck carrying a four-man crew will travel to and from the Island three times a day.

The rig used for the workover project is exempt from permit requirements of the Ventura County Air Pollution Control District under its Rule 23.D.5. Notwithstanding the exemption, the project would not be considered a major source because emissions of each pollutant are less than 25 tons per year.

C. WATER

Rincon Island has an external berm height of 30 feet above sea level on the southerly or weather side of the Island. The other exterior sides of the Island are of lesser height since wave action is less likely to broach these walls. On the Island is a spill containment system of containment walls around the tank battery and well cellar areas with drainage and return channels and berms to direct any spill back to the well cellar.

Surface water runoff on Rincon Island is contained and handled by an existing drainage system. The drainage system is connected to existing tankage where runoff water can be accumulated. The fluid is treated to separate out any oil, and the water is then disposed of through a system of existing injection wells. The proposed project would not alter this system or cause an increase in the rate and amount of surface water runoff. It is possible that ground water aquifers may be penetrated during the well deepening operations. Contamination of ground water would be prevented as described in Section 7.

The Island is visited regularly by a State Lands Commission inspector and all equipment is inspected for proper operating condition.

Produced water would be reinjected into a producing formation, rather than discharged to the ocean, through a system of existing injection wells. This system had a historic peak injection rate of 8,300 BWPD. The rate of reinjection for the proposed project is not known at this time; however, it would be significantly less than the historic peak injection rate.

Fresh water requirements for the project would be minimal and would be met through the existing municipal system. The only fresh water requirement

would be that for personal use of the work crew and sanitation since cement operations would use seawater and mud mixtures would use produced water.

In summary, implementation of the proposed project would not result in significant effects on hydrologic resources. There would be no alteration in the drainage pattern, quantity, or quality of existing surface water flow. No significant impacts on ground water aquifers are anticipated. The proposed project would not result in a significant long-term increase in fresh water use. The project activities would not involve discharges to the ocean or cause changes in the existing character of marine waters. There would be no increase in risk of exposure to potential hydrologic hazards.

D. PLANT LIFE

Commercial kelp beds grow along the coast between Ventura and Santa Barbara principally on rocky bottom areas. The beds are harvested to a maximum depth of 4 feet (Dames and Moore, 1988). The project is not expected to have any effect on these kelp beds nor on their commercial exploitation.

Vegetation around the project well on the Bush property ashore has been cleared. Vegetation on Rincon Island primarily consists of introduced palm trees, planted to shield onshore views of oil production facilities. No native vegetation types occur. The palms are situated on the perimeter of the island in planters and do not occur within the existing production facilities area. Because no new facilities would be constructed, no existing plant life would be disturbed or eliminated if the proposed project were implemented. No new species of plants would be introduced during the project, and the existing limited plant diversity would remain unchanged.

E. ANIMAL LIFE

There is no native terrestrial wildlife habitat present on Rincon Island. Consequently no use is made of the island by native terrestrial amphibian, reptile, or mammal species. The island may be used by terrestrial and marine birds for resting. Shorebirds do occur there regularly, primarily during resting periods. Some foraging by these shorebirds may occur on the rocky, outer portions of the island. No breeding by any native terrestrial wildlife species is expected to occur on the island.

Construction of Rincon Island resulted in the creation of a hard substrate intertidal and subtidal habitat in a marine environment predominantly characterized by soft bottom subtidal habitat. As a consequence, there was an associated increase in the abundance and diversity of marine biota at and

around the island as species colonized the newly available substrate. This colonization is commonly observed at man-made structures in the marine environment.

The northern Channel Islands region of the Southern California Bight is located at a major transition point between the biogeographical coastal provinces, the temperate Oregonian and the subtropical Californian or San Diegan. The biota of this transition zone include species from the northern subarctic and Southern Equatorial water masses, along with endemic and elements from the Central Pacific water mass. Species diversity in this area is higher than in areas to the north or south. The Santa Barbara Channel serves as a funnel for migrating birds, especially shearwaters and brant, as well as a migratory route for the gray whales (Dames and Moore, 1988).

Sensitive species that may potentially occur near the island include the state and federal listed endangered California brown pelican (Pelecanus occidentalis californicus) and the protected marine mammals-California sea lion (Zapophus californianus) and bottlenose dolphin (Tursiops truncatus). California brown pelicans may occasionally feed in the waters adjacent to the island but are not expected to occur regularly near the island. Small numbers of California sea lions may occasionally occur near the island, but if present, these animals have become acclimated to the oil production activities occurring on the island. Since the 1983 El Nino Southern Oscillation event, between 30 and 50 bottlenose dolphins have been recorded during each month on a yearly basis in the small bay immediately north of Rincon Island. These dolphins apparently feed in nearshore waters and are not expected to occur regularly near the island.

Neither the proposed remedial workover nor the following production operations are expected to have significant impacts on the biological resources of the project area. No new animal species would be introduced. Existing marine habitats currently used by wildlife would not be disturbed since the proposed project would involve activities on the industrialized portions of the island and the property ashore only.

F. NOISE

Ambient noise measurements were taken within a 2.5 mile radius of Rincon Island. The results of the measurements are presented in Table 4, and the locations of the measurement sites are shown on Exhibit F. Ambient noise within the 2.5 mile radius is primarily composed of truck and automobile traffic from U.S. Highway 101 and ocean surf. Additional noise is generated

TABLE 4

AMBIENT NOISE MEASUREMENTS

<u>Location</u>	<u>Representative Noise Levels *</u>			
	<u>Morning</u>	<u>Afternoon</u>	<u>Evening</u>	<u>Night</u>
Site 1 - Rincon Point	71	73	66	65
Site 2 - Punta Gorda	64	66	64	64
Site 3 - Punta Gorda	72	71	73	67
Site 4 - Oil Piers	73	72	72	67

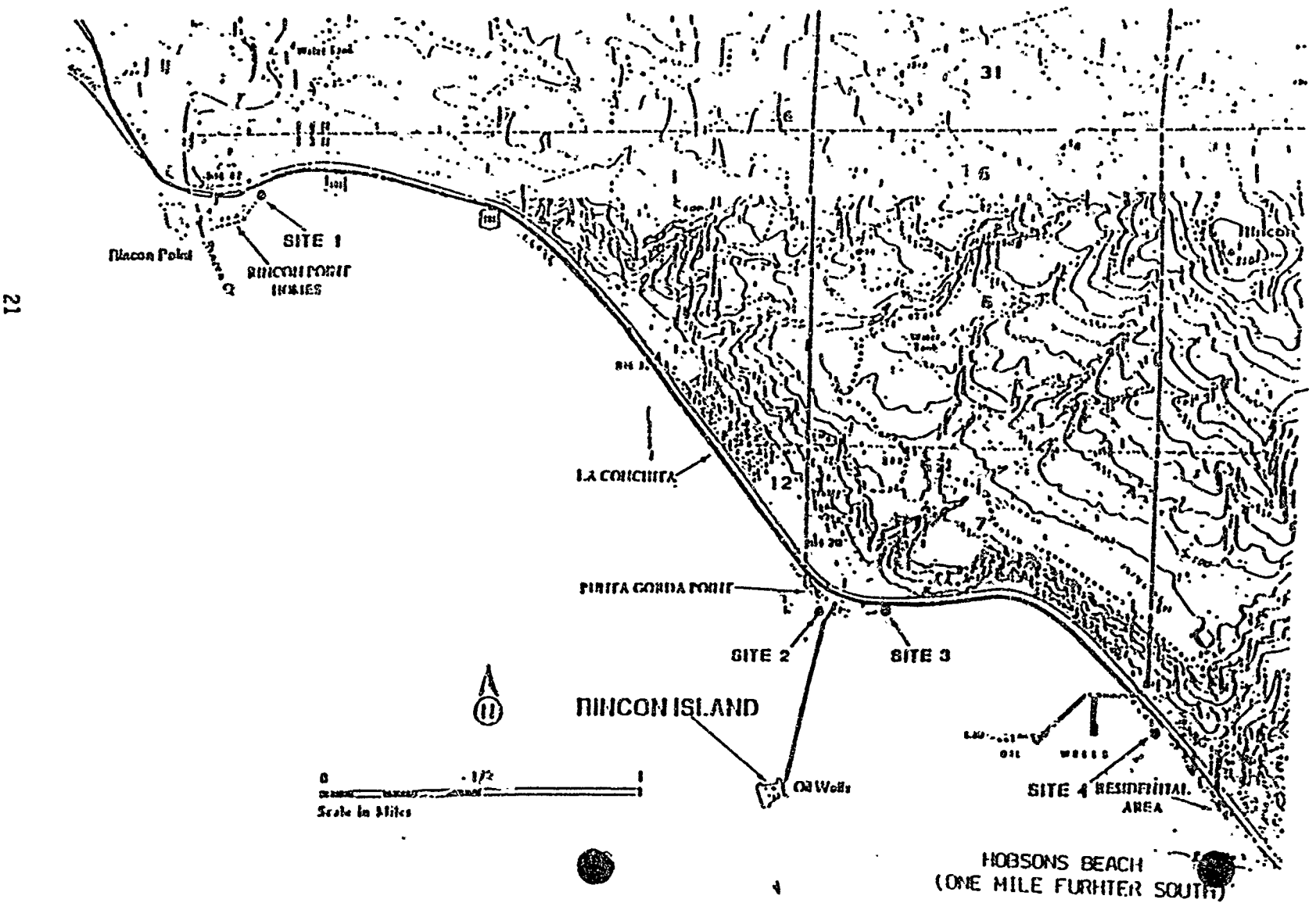
Typical noise ranges during each site sampling period are as follows:

<u>Location</u>	<u>Observed Noise Level Range *</u>			
	<u>Morning</u>	<u>Afternoon</u>	<u>Evening</u>	<u>Night</u>
Site 1 - Rincon Point	63-77	61-77	62-76	60-70
Site 2 - Punta Gorda	53-69	55-71	61-76	60-76
Site 3 - Punta Gorda	60-76	58-74	62-76	61-71
Site 4 - Oil Piers	60-79	59-75	60-76	59-71

* measurements given in dB A

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EXHIBIT F
 LOCATIONS OF NOISE SURVEY SITES
 TENNACO - RINCON ISLAND



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HOBSONS BEACH
 (ONE MILE FURTHER SOUTH)

by passing trains and occasional air traffic. The nearest noise sensitive receptors to Rincon Island and the project area are:

- Rincon Point Homes - 2.5 miles N.W. of Rincon Island;
- La Conchita - 1.0 miles N.N.W. of Rincon Island;
- Punta Gorda Point (Mussel Shoals) - 0.5 miles N. of Rincon Island;
- Seacliff Residential - 1.5 miles E.S.E. of Rincon Island, and;
- Campground (Hobson's Beach) - 2.0 miles E.S.E. of Rincon Island.

The receptor locations are also shown on Exhibit F.

During the remedial and workover project a 350 horsepower Detroit Diesel rig would be used, and some increase in traffic would occur. Any noise levels generated by the rig are expected to be attenuated substantially due to the distance between the project area and the receptors. Any sound generated by the project activities would not be perceived above existing ambient traffic, train, and surf noise levels, and there would therefore not be any significant noise effect. Since no new equipment is required for the production facilities, no incremental noise increases are expected.

G. LIGHT AND GLARE

Existing sources of light and glare in the project area are for the most part minor and consist of lights on Highway U.S. 101, street and residence lights in La Conchita, the beach residences and the hotel at Punta Gorda, the residences at the Seacliff beach community, and lighting in the project area on Rincon Island, the Mobil-Ferguson Pier, and the oil company areas along old Highway 1 north of Highway 101.

During the project nighttime operations lighting would be necessary around the well pads. Other sources of light would be from trucks delivering emergency supplies at night and crew vehicles. The nearest light sensitive receptors would be the residences and hotel located at Punta Gorda at least 3,000 feet from the project site. The substantial distance of light sensitive receptors to the project area and the plan to conduct project work in daylight hours except during critical open-hole operations are expected to result in only insignificant impacts from nighttime lighting as described in Section 7. During production, after the remedial work, the amount of lighting would not increase from current levels.

TABLE 5
VENTURA COUNTY POPULATION AND HOUSING ESTIMATES
JANUARY 1, 1990

CITY	POPULATION		HOUSING UNITS				PERSONS PER HOUSEHOLD			
	TOTAL	HOUSEHOLD	SINGLE FAMILY	APART-FAMILY	MULTIFAMILY	MOBILE HOME	OTHER	PER HOUSEHOLD		
CAMARILLO	10649	4014	10149	3992	780	3440	760	18007	2.45	2.701
FILMORE	3522	221	2424	146	237	483	232	3456	1.87	3.244
MOOREHEAD	7797	4	5612	834	236	886	189	7663	1.73	3.400
ORLANDO	3037	319	3105	133	103	815	1	3043	2.06	3.603
PLACENTIA	40200	1552	21470	2665	3668	10128	3249	32117	4.10	3.291
SANTA FE VALLEY	37681	1762	3298	2117	1005	2142	78	6879	9.97	3.672
SANTA FE VALLEY	20287	1007	20287	3384	4127	8475	2232	36308	3.16	3.311
SANTA FE VALLEY	8068	329	4417	628	1042	1170	733	7748	3.94	3.069
SANTA FE VALLEY	21462	131	24331	2115	1109	4183	720	30603	5.73	3.313
THOUSAND OAKS	37183	1888	34775	4333	1577	6676	832	35017	3.35	3.815
TOTAL INCORPORATED	570345	513012	118689	15291	14101	36426	8033	168857	3.06	3.981
UNINCORPORATED	87708	54022	24201	822	1149	2584	1670	20223	3.66	3.163
COUNTY TOTAL	668053	567034	142890	16113	15250	39010	9703	219080	3.78	3.006

CA. DEPARTMENT OF FINANCE
DEMOGRAPHIC RESEARCH UNIT
PRINTED 01/26/90

NOTE: Received from Ventura
County Planning Dept.
May, 1990

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TABLE 6
 COUNTY OF VENTURA
 1980 - 2010 POPULATION FORECAST

Growth Area/ Nongrowth Area*	Census 4/1/80	1985	1990	1995	2000	2005**	2010**
Camarillo GA	43,722	52,590	51,550	58,129	74,320	79,340	84,222
Camarillo NGA	3,668	3,680	3,039	3,510	6,140	6,640	7,100
Fillmore GA	9,604	10,300	12,220	13,310	14,250	15,220	15,170
Fillmore NGA	2,182	2,240	2,240	2,220	2,220	2,220	2,220
Las Posas NGA	1,312	2,020	2,120	2,240	2,340	2,440	2,520
Moortpark GA	8,034	14,250	22,020	29,590	35,740	41,590	47,020
Moortpark NGA	670	690	750	780	810	820	860
North Half NGA	437	540	570	620	650	690	720
Oak Park GA	3,617	4,330	12,120	17,150	16,740	15,220	15,720
Oak Park NGA	223	200	320	340	350	370	390
Ojai GA	3,412	9,970	9,460	9,580	9,620	9,700	9,760
Ojai NGA	2,298	2,540	2,540	2,520	2,700	2,780	2,860
Oxnard GA	122,053	127,700	141,000	159,000	130,000	128,000	127,300
Oxnard NGA	4,997	5,000	5,150	5,100	5,100	5,090	5,170
Pismo GA	1,268	1,400	1,910	1,980	2,150	2,300	2,440
Pismo NGA	196	200	240	250	230	300	320
Port Ewin GA	13,207	20,000	21,570	22,310	24,050	25,220	25,220
Santa Paula GA	20,889	22,220	24,500	25,000	27,500	29,000	30,500
Santa Paula NGA	2,958	3,020	3,050	3,050	3,220	3,050	3,050
Simi Valley GA	80,294	90,640	103,220	112,520	122,170	129,220	136,920
Simi Valley NGA	1,037	1,400	1,800	1,320	2,040	2,250	2,470
Thousand Oaks GA	91,962	101,910	109,300	113,200	125,200	122,500	122,200
Thousand Oaks NGA	1,070	1,220	1,220	1,260	1,450	1,540	1,520
Ventura GA	33,209	30,100	33,000	30,000	32,500	31,000	31,300
Ventura NGA	982	1,220	1,220	1,220	1,240	1,200	1,240
Vca. Riv. GA	12,249	12,500	12,000	14,260	14,540	15,100	15,300
Vca. Riv. NGA	1,509	1,510	1,510	1,520	1,560	1,590	1,720
TOTAL COUNTY	529,174	584,360	659,250	722,320	787,770	841,730	892,770

*See attached map. Growth Areas are generally larger than incorporated areas for census.
 **To be used for guideline purposes only.
 Approved by Board of Supervisors on 5/7/85.

NOTE: Except for 1980, all forecasts are January 1 forecasts.

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NOTE: Received from Ventura
 County Planning Dept.
 May, 1990

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TABLE 7
 COUNTY OF VENTURA
 1980 - 2010 DWELLING UNIT FORECAST

Growth Area/ Nongrowth Area	Census		Forecast				
	4/1/80	1985	1990	1995	2000	2005	2010
Camarillo GA	16,304	19,039	22,122	25,312	29,484	31,434	35,454
Camarillo NGA	1,043	1,043	1,208	1,741	1,973	2,206	2,438
Fillmore GA	3,055	3,129	4,043	4,544	5,040	5,326	6,032
Fillmore NGA	729	760	773	797	820	843	866
Las Posas NGA	354	351	608	666	723	781	838
Moorpark GA	2,476	4,361	7,373	9,320	12,221	14,722	17,224
Moorpark NGA	257	259	304	322	343	353	377
North Half NGA	322	340	350	380	399	413	437
Oak Park GA	1,078	1,447	4,091	5,598	5,598	5,598	5,598
Oak Park NGA	76	95	110	120	130	140	150
Ojai GA	1,315	1,502	1,797	1,912	4,027	4,127	4,227
Ojai NGA	855	929	966	1,023	1,076	1,125	1,157
Oxnard GA	39,813	42,029	43,980	55,986	65,217	72,931	82,120
Oxnard NGA	1,237	1,293	1,398	1,454	1,509	1,563	1,620
Pico GA	380	388	525	603	677	751	825
Pico NGA	64	64	82	91	100	110	113
Port Huachuca GA	6,942	7,221	8,201	8,580	9,559	10,323	11,013
Santa Paula GA	7,223	7,645	8,750	9,559	10,377	11,197	12,002
Santa Paula NGA	865	882	924	968	1,002	1,026	1,071
Simi Valley GA	22,534	25,423	31,761	35,573	39,988	44,102	48,225
Simi Valley NGA	447	561	663	774	883	992	1,101
Thousand Oaks GA	31,302	35,019	39,400	43,430	47,900	51,400	55,300
Thousand Oaks NGA	607	653	702	749	796	843	891
Ventura GA	33,311	36,134	38,430	42,357	47,435	50,342	54,249
Ventura NGA	627	674	698	722	722	767	791
Vta. Riv. GA	4,915	5,074	5,467	5,742	6,017	6,292	6,568
Vta. Riv. NGA	575	601	625	649	673	701	725
TOTAL COUNTY	153,134	160,342	172,822	183,905	194,374	202,673	214,143

*See attached map. Growth Areas are generally larger than incorporated areas for cities.
 *To be used for guideline purposes only.

Approved by Board of Supervisors on 5/7/85.

NOTE: Except for 1980, all forecasts are January 1 forecasts.

L76/2

NOTE: Received from Ventura
 County Planning Dept.
 May, 1990

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EXHIBIT G
 VENTURA COUNTY
 POPULATION GROWTH AREA

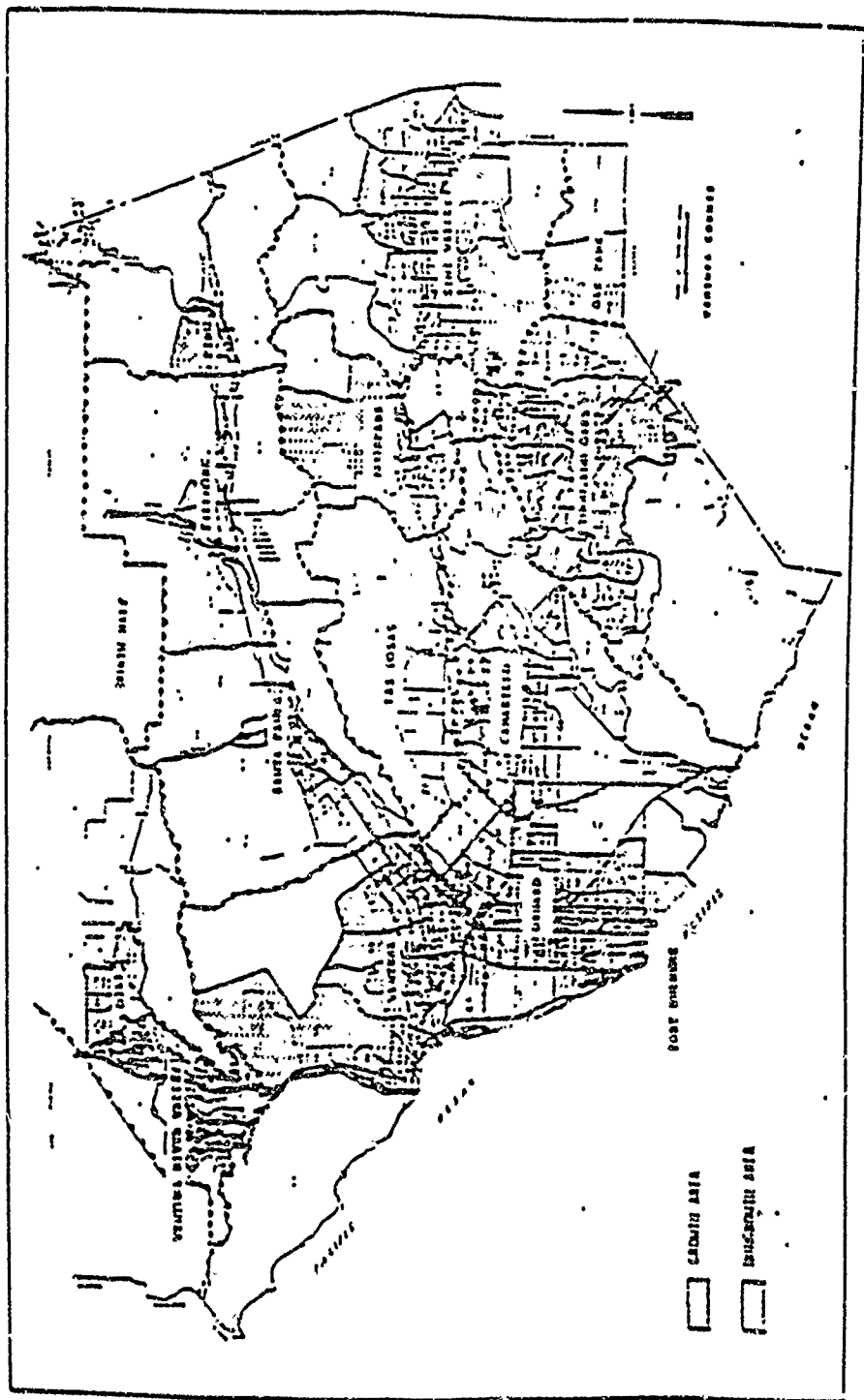
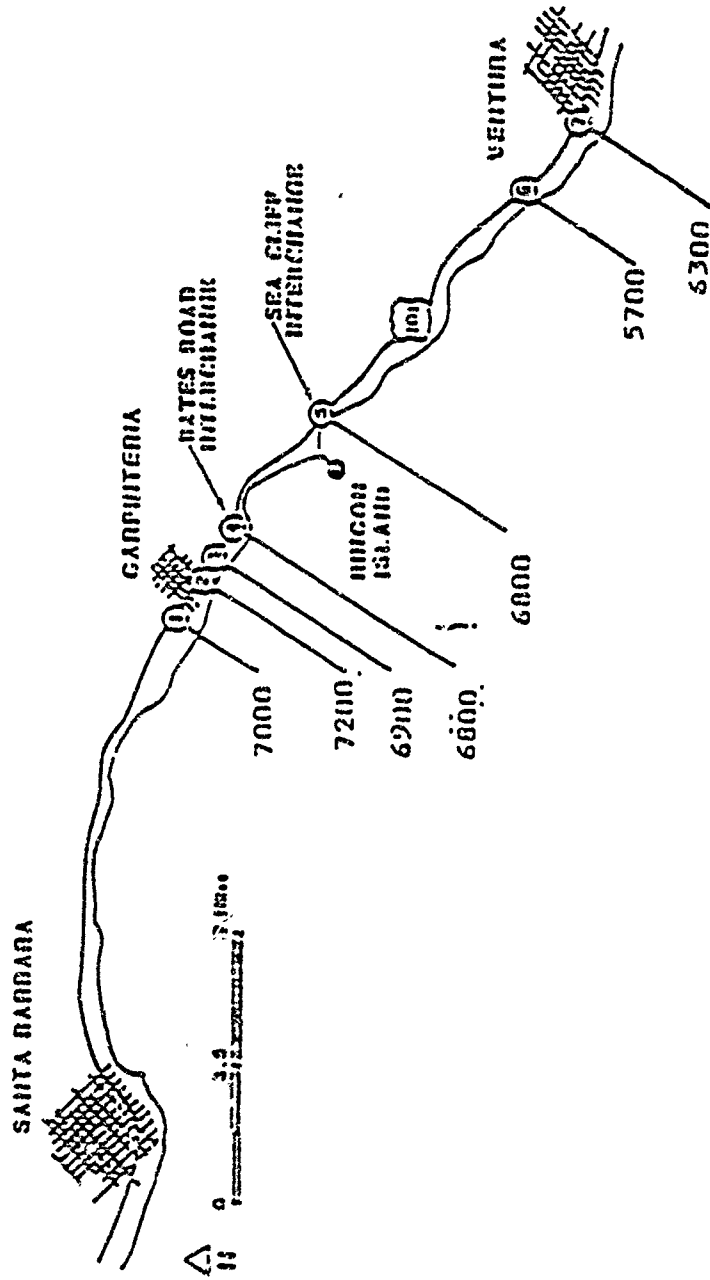


EXHIBIT II
PEAK HOUR TRAFFIC VOLUMES
1980



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TABLE 9
 SANTA BARBARA COUNTY
 POPULATION, EMPLOYMENT, AND HOUSING FORECASTS

<u>Population:</u>			
	1990	-	
	1995	-	350,900
	2000	-	378,500
	2005	-	404,200
<u>Housing Units:</u>			
	1990	-	
	1995	-	134,269
	2000	-	144,548
	2005	-	154,187
<u>Employment:</u>			
	1988:		
	Labor Force		178,700
	Employment		170,800
	Unemployment Rate		4.4%
	Estimated Employment in 2005		211,000

Source: "Forecast 89"
 Santa Barbara County-Cities
 Area Planning Council, August 1989

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TABLE 10
1988 TRAFFIC COUNTS

	LOCATION	AVERAGE DAILY TRAFFIC	
		PEAK HOUR	PEAK MONTH
1.	Jct Rte. 244 Interchange	7,000	68,000
2.	El Rincon Interchange	7,200	70,000
3.	Jct. Rte. 150 Interchange	6,900	66,000
4.	Bates Road Interchange	6,800	65,000
5.	Sea Cliff Interchange	6,800	55,000
6.	Solimar Interchange	5,700	55,000
7.	Jct. Rte. 33 Interchange	6,300	64,000

AA SOURCE: Caltrans Office, Los Angeles
Caltrans Office, San Luis Obispo

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TABLE 8
VENTURA COUNTY
ESTIMATED TOTAL EMPLOYMENT
UNIT - JOBS

AREA	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	2000	2005	2010
Camarillo GA	15,454	16,651	16,841	17,429	17,994	18,564	19,131	19,699	20,121	20,513	20,964	21,394	21,808	21,519	25,442	20,014
Camarillo MGA	1,005	1,017	1,030	1,097	1,164	1,230	1,297	1,364	1,383	1,402	1,421	1,440	1,459	1,476	1,527	1,544
Fillmore GA	2,311	2,310	2,369	2,456	2,547	2,635	2,724	2,813	2,863	2,912	2,962	3,011	3,041	3,137	3,348	3,402
Fillmore MGA	437	442	448	466	484	502	520	538	537	537	536	536	533	550	402	450
Las Posas MGA	811	822	832	845	857	876	882	895	904	913	923	932	941	1,006	1,074	1,139
Moorpark GA	3,050	3,098	3,137	3,430	3,724	4,017	4,311	4,604	4,718	4,892	5,037	5,182	5,326	5,861	4,015	5,039
Moorpark MGA	0	0	0	35	70	104	139	171	212	251	289	328	367	567	772	1,030
Oak Park GA	48	48	49	92	135	177	220	243	315	366	418	459	521	670	812	1,020
Oak Park MGA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ojai GA	3,195	3,225	3,245	3,293	3,324	3,350	3,378	3,404	3,412	3,419	3,425	3,432	3,438	3,467	3,492	3,513
Ojai MGA	148	150	152	155	158	160	163	166	169	172	174	177	180	193	207	221
Oxnard GA	47,332	47,929	48,526	50,311	52,156	53,970	55,785	57,600	59,436	61,272	63,108	64,911	65,780	77,100	89,100	101,447
Oxnard MGA	7,701	8,000	8,100	8,292	8,485	8,677	8,870	9,052	9,955	10,118	10,281	10,445	9,792	10,408	11,351	13,078
Piru GA	191	194	195	207	217	230	242	253	258	263	267	272	277	280	299	308
Piru MGA	130	162	164	170	176	182	188	194	197	201	204	208	211	234	240	245
Port Hueneke GA	12,280	12,615	12,400	12,724	12,843	12,971	13,095	13,219	13,312	13,405	13,499	13,593	13,685	13,919	14,391	14,554
Santa Paula GA	6,531	6,614	6,696	6,827	6,958	7,086	7,219	7,350	7,440	7,530	7,620	7,710	7,800	8,250	8,700	9,015
Santa Paula MGA	411	419	430	462	468	475	481	488	500	512	525	537	540	580	641	681
Simi Valley GA	15,913	16,514	16,315	17,181	18,047	18,912	19,778	20,411	21,172	22,300	23,177	23,955	24,781	30,293	34,809	40,069
Simi Valley MGA	2,609	2,641	2,674	2,731	2,798	2,814	2,903	2,930	3,023	3,084	3,150	3,213	3,274	3,528	3,774	3,944
Thousand Oaks GA	29,821	30,197	30,573	31,712	32,851	33,989	35,128	36,267	37,531	38,795	40,060	41,324	42,508	48,070	54,365	60,267
Thousand Oaks MGA	95	95	97	103	120	131	143	154	165	136	127	118	109	116	123	132
Ventura (Oj) GA	5,466	5,535	5,604	5,619	5,634	5,650	5,665	5,680	5,790	5,900	6,011	6,121	6,231	6,658	7,014	7,252
Ventura (Po) GA	29,287	29,657	30,026	30,374	30,723	31,071	31,420	31,768	32,553	33,338	34,122	34,907	35,492	40,227	43,354	46,785
Ventura (SP) GA	12,038	12,190	12,342	12,861	13,380	13,898	14,417	14,936	15,803	16,670	17,538	18,405	19,272	23,594	28,171	32,291
Ventura (Oj) MGA	51	51	52	52	53	53	54	54	54	55	55	56	56	70	73	80
Ventura (Po) MGA	419	425	430	436	442	449	455	461	467	473	480	486	492	522	551	584
Ventura (SP) MGA	0	0	0	0	1	1	2	2	2	3	3	4	4	5	7	10
Ventura River GA	1,185	1,200	1,215	1,252	1,289	1,326	1,363	1,400	1,436	1,472	1,508	1,544	1,500	1,762	1,963	2,090
Ventura River MGA	62	63	64	64	64	64	64	64	64	64	65	65	65	83	85	92
North Half	110	112	113	115	118	120	123	125	127	129	132	134	136	156	173	200
Ojai Vly Airshd	10,997	10,224	10,352	10,435	10,519	10,603	10,687	10,770	10,925	11,082	11,238	11,395	11,550	12,000	12,834	13,256
Oxnard Pln Airshd	189,148	191,534	193,920	200,278	206,639	212,989	219,350	225,707	233,177	239,918	246,651	253,405	259,329	295,000	329,791	366,365
ADSD Plng Area	199,245	201,758	204,272	210,713	217,153	223,592	230,037	236,477	244,102	251,000	257,899	264,800	270,879	307,672	342,625	379,621
COUNTY TOTAL	199,395	201,870	204,389	210,828	217,376	223,712	230,160	236,602	244,229	251,129	258,031	264,934	271,015	307,828	342,798	379,821

NOTE: Received from Ventura County Planning Dept. May 31, 1990

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H. LAND USE

Rincon Island was built specifically for the purpose of petroleum production. The proposed project would therefore be consistent with this existing, approved land use. The proposed project would also be compatible with the land uses near the Bush Oil Company yard which include other petroleum production operations. The production lifetime of 10 years following project work is not expected to significantly affect future land use options at the project location.

I. NATURAL RESOURCES

The project is expected to yield approximately 4.1 million barrels of oil and 818 million cubic feet of natural gas as shown in Table 1 and discussed in paragraph 2. The diesel powered workover rig will use fuel during the project.

J. RISK OF UPSET

Although very unlikely, the possibility of an accidental release of drilling mud or crude oil exists. The quantity of mud that could be released would be the amount contained within the well bore of approximately 100-150 barrels. The amount of crude oil that could be released would depend on the nature of the accident; however, all the project workover wells are non-free-flowing wells. The probability of an oil spill is therefore very low. The measures used to mitigate an accidental release of mud or oil are described in Section 7.

K. POPULATION AND HOUSING

Population centers in Ventura County include the cities of Oxnard, Ventura, and Port Hueneme. Ventura and Port Hueneme serve as major offshore and onshore petroleum industry centers. Port Hueneme functions as the principal supply port for offshore Santa Barbara and Ventura counties. Petroleum-related services in Ventura include oil field maintenance, oil well completion and pumping equipment, and oil well servicing. Exploration and production offices of several major oil companies are also located in Ventura. Oxnard, because of its substantial population base, provides a labor pool for petroleum-related industries in Ventura County.

Principal population centers in Santa Barbara County include the cities of Carpinteria, Guadalupe, Lompoc, Santa Barbara, and Santa Maria and the unincorporated Goleta Valley. Within the southern portion of Santa Barbara County, several oil companies, including Chevron, have had increased activities due to the construction of offshore platforms and onshore processing and terminal facilities. In northern Santa Barbara County, particularly near

Santa Maria, several companies operate oil field servicing and maintenance services for onshore petroleum production operations; little or none of their activity is related to offshore development.

Population, housing, and employment estimates for Ventura County vary considerably among various sources. Table 5 provides Ventura County Population and Housing Estimates dated January 1, 1990, from the California Department of Finance Demographic Research Unit. This source estimates total Ventura County housing units as 184, 227. Tables 6 and 7 provide population and dwelling unit forecasts as approved by the County Board of Supervisors in 1985 and provided by the County Planning Department in May 1990. Exhibit G, provided by the County Planning Department, illustrates growth and nongrowth areas within Ventura County. The Bush project is in a nongrowth area.

Table 8 provides estimates and forecasts of total employment in Ventura County. The total number of jobs is estimated as 236,602 for 1990. Unemployment among the labor force has been estimated roughly as 5 to 7 percent.

Table 9 provides forecasts of population, housing, and employment in Santa Barbara County (Santa Barbara County-Cities Area/Planning Council, August, 1989). This document, Forecast 89, shows a 1990 Santa Barbara County population of 350,900.

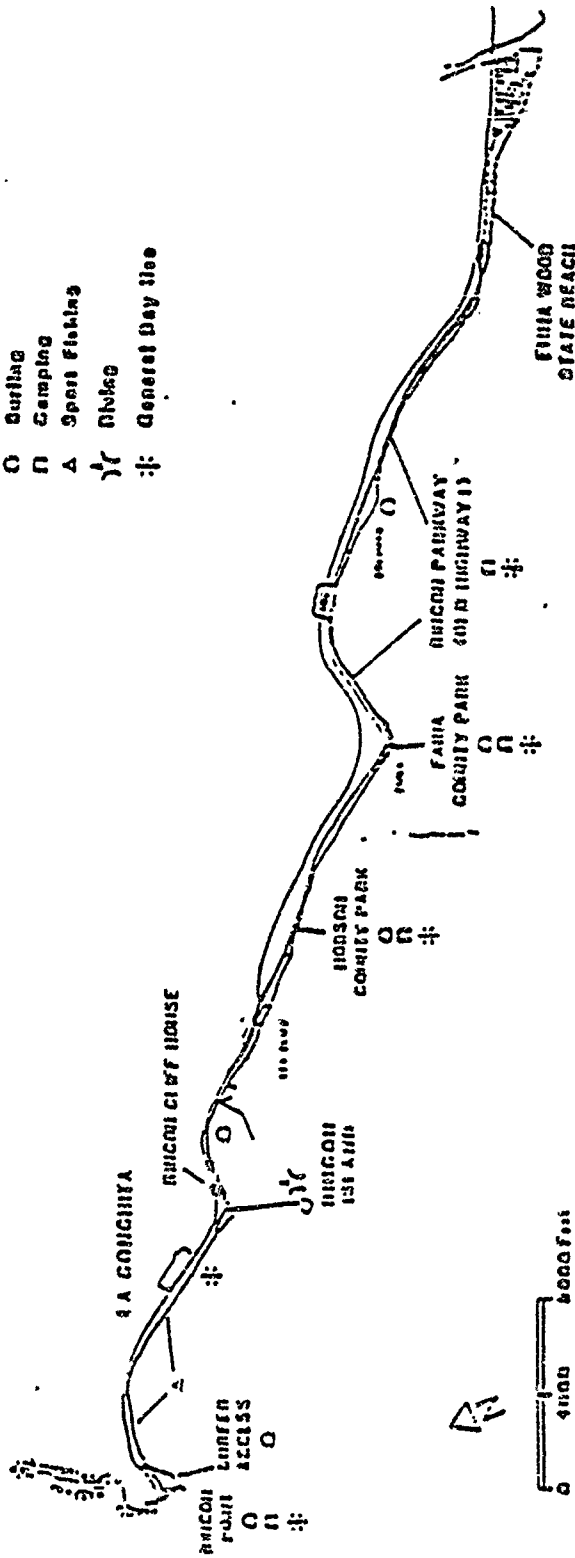
In contrast a recent Environmental Report for OCS lease P-0525, about 10 miles south of the project area, shows population projections for Ventura and Santa Barbara Counties as follows (Dames and Moore February 1988):

<u>YEAR</u>	<u>SANTA BARBARA CO.</u>	<u>VENTURA CO.</u>
1990	339,700	682,400
1995	358,300	762,500
2000	373,800	838,500

During the proposed project approximately 5 workers would be involved in daily activities. This work force would come from the Ventura-Ojai area or the Santa Barbara area. Because of the small size and local nature of the work force, implementation of the proposed project would not result in any population changes, nor would it affect housing demand in the region. The production following the project work would involve existing work forces; no new permanent jobs would be produced, and housing demand would not be affected.

**EXHIBIT I
RECREATIONAL AREAS**

- LEGEND**
- O Surfing
 - Camping
 - △ Sport Fishing
 - ∇ Dunes
 - ⊞ General Day Use



NOTE: Channel Islands National Park is located approximately 20 to 30 miles offshore.

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L. TRANSPORTATION CIRCULATION

U.S. Highway 101 1988 traffic volumes are presented in Table 10 for the project area. The annual average daily traffic is the total traffic volume for the year divided by 365 days. The peak month average daily traffic volume is the average daily traffic for the month of heaviest flow. Locations of the interchanges where the traffic volumes were measured are shown on Exhibit H.

The remedial and workover program would involve about two truck trips per week and 3 commuter vehicle trips per day. Access to the Bush Oil Company yard would be via the Seacliff offramp and the old Rincon Highway (Highway 1). All vehicles would use the trestle causeway from U.S. Highway 101 and Punta Gorda for access to or exit from Rincon Island. The maximum traffic generated would represent less than 0.05 percent of the existing 1988 daily traffic for a period of one year. The additional traffic generated during the proposed project would not have a significant impact on the existing transportation system. Since only the existing work force would be involved in production following workover, traffic levels in the area would not be increased, and the existing transportation system would not be affected. Measures to further reduce impact on the existing transportation system are described in Section 7.

M. PUBLIC SERVICES AND UTILITIES

Fresh water would be needed for personnel use only; this water would be supplied via the existing municipal water system. The existing fire water systems would be used to provide sea water for cementing operations, and produced water would be used for mud make up.

The existing sanitation systems would be used during all phases of the proposed project. There would be a negligible increase in the level of electrical power requirements.

Approximately 700 cubic yards of cuttings and waste mud would be generated during the entire workover project. These wastes would be disposed of at an approved Class II-I or Class I dumpsite as a non-hazardous waste.

The work force during the project would be small and local in nature, and the enhanced production following workover would involve only the existing work forces. Existing facilities would provide sanitation, fresh water, mud make up water, and other requirements. Therefore, it is anticipated that no significant new demand for public services (e.g., fire and police protection, schools) or utilities would occur as a result of the proposed project.

N. ENERGY

During the workover project, fuel would be required for the 350 horsepower diesel workover rig and for the mudpump as well as some small increase in electricity for night lighting.

Since no new facilities would be constructed, no significant increase in energy use would occur. Because of the limited scope of the proposed project, substantial use of fuel or energy would not be required. The proposed project would not substantially increase demand on existing energy sources, nor would it require the development of new energy sources.

O. HUMAN HEALTH

In dealing with crude oil and gas, the potential always exists for releases, spill, and fires. The potential for such accidents from this proposed workover project is very low because all the wells are no-free-flowing wells. Thus, the possibilities of a blowout is almost non-existent. During the 17-year period from 1971 to 1987, there were only 20 blowouts during workover operations on federal offshore wells and only two of these resulted in the release of oil, one for 200 bbls and one for 64 bbls (MMS, 1989). A spill from a well, pipeline, or tank would be contained on the island. A spill in the well area should be contained by the well bay which can contain up to 2400 bbls. All except one of the tanks on the island are located in a 4800 bbl containment area that can contain the contents of the largest tank, which is 1500 bbl. There is a 2000 bbl produced water tank outside the tank area. A spill from this tank would drain to the well bay. In addition, the sides of the Island are generally elevated at least 10 feet above the level of the production facilities area. Where the Island opens toward the trestle, the ground surface slopes down to the production facilities area. Consequently, if an oil spill occurred that exceeded the capacity of individual containment structures, the Island itself would serve as a further containment structure. The Island (not counting the well bay area and tank area) can contain at least another 10,000 bbls. A spill contained on the island would not pose a hazard to human health.

Although it would be difficult to ignite any spilled oil on the island, it is possible. As a worst case fire, it was assumed that a spill occurs that covers the entire floor of the Island and then ignites. The Port of Los Angeles Hazard Footprint Calculation Program (Reese-Chambers Systems Consultants, 1990) was used to calculate the radiant heat hazard footprint from such a fire. The distance to 1600 Btu/sq ft/hr was determined to be 550 feet from the edge of the Island. People located outside this distance should be safe from such a fire. Thus, such a fire would not pose a hazard to members of the

public on shore.

The gas produced on the island contains extremely low levels of H₂S and is thus classified as sweet gas. Such gas does not pose a toxic inhalation threat.

Thus, an accident on the Island should not pose a hazard to members of the public.

P. AESTHETICS

The project workover rig and other facilities would be situated within the depressed interior of Rincon Island and therefore partially hidden from view. Further visual screening would be provided by palm trees. The work on the Bush Oil Company Yard would appear to be similar to existing operations. Operation of the 98 foot high mobile workover rig, the mud tanks, and other facilities would cause a slight, temporary change in the visual environment of Rincon Island. Activities visible from shore during the workovers would appear similar to periodic maintenance operations which presently occur on the island. Given the temporary nature of the project and the visual similarity to present operations, no significant visual impact on offsite viewers is anticipated.

Q. RECREATION

Recreational areas in the vicinity of Rincon Island are shown on Exhibit I. Recreational activities include surfing, camping, sport fishing, diving, and general beach day use. The project is not expected to: (1) significantly increase the existing traffic conditions, (2) significantly decrease the offsite visual character of the Island, (3) significantly contribute to an increase in ambient noise levels, nor (4) import a significant number of new workers that would be using the available recreational facilities. Therefore, the proposed project is not expected to have a significant impact on existing recreation use in the area. The production operations following the project would require no new personnel, and no new equipment would be constructed. Therefore, no changes from existing conditions would be anticipated, and no impact is expected on existing recreational use in the area. Due to the separation of the project facilities from existing recreation facilities, it is not expected that recreation activities would have a significant impact on the project activities.

R. ARCHAEOLOGICAL AND HISTORICAL EFFECTS

No archaeological or historical resources are expected to be present in the project area. Therefore, no effects on such resources are anticipated during the project or during enhanced production following the project.

6. ANY ADVERSE EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

Potential environmental impacts of the proposed project are discussed in Section 5. These impacts would be localized, temporary, and of minor significance. Therefore, it is expected that no unavoidable significant adverse environmental impacts would result from implementation of the proposed project.

7. MITIGATING MEASURES WHICH HAVE BEEN INCORPORATED IN THE PROJECT

Where appropriate, mitigation measures are proposed to further reduce environmental impacts. The measures suggested for each environmental category are presented below:

A. EARTH

Bush would comply with applicable State Lands Commission, the California Division of Oil and Gas, and other appropriate regulations and requirements pertaining to well workovers, casing blowout prevention, and completion in order to minimize the potential for significant environmental impacts due to ground motion, fault rupture, subsidence and tsunamis.

B. AIR

No mitigation measures are proposed.

C. WATER

- i. Bush will comply with all rules and regulations pertaining to the prevention of degradation of water quality. By implementing casing and cementing operations, it is expected that no fluids would be lost to either ground or surface waters. Should an accidental leak or spill occur, the mitigation measures included in the project design and Bush's Oil Spill Contingency Plan would prevent or minimize contamination of ocean or ground water.
- ii. Cuttings and mud wastes would be disposed of at an approved Class II-1 or Class I dumpsite as a non-hazardous waste in accordance with appropriate regulatory requirements. No ocean discharge of muds or cuttings would be conducted.

D. PLANT LIFE

No mitigation measures are proposed.

B. ANIMAL LIFE

No mitigation measures are proposed.

F. NOISE

No mitigation measures are proposed.

G. LIGHTING AND GLARE

The illumination of the workover activities at night will be limited by appropriate shielding and directing techniques to reduce reflection and glare.

H. LAND USE

No mitigation measures are proposed.

I. NATURAL RESOURCES

No mitigation measures are proposed.

J. RISK OF UPSET

- i. The project operation would employ state-of-the-art blowout prevention technology and mud monitoring equipment.
- ii. All supervisory personnel will be blowout and well control certified.
- iii. The well bay on Rincon Island can contain 2400 barrels of fluid, mud, or oil.
- iv. Design of the Island is such that spilled mud drains into the well bay trough. There are cellars on either end of this trough from which the mud can be pumped to a steel separation tank to separate out any oily wastes. This mud can then be transferred to a vacuum truck for disposal at an approved dumpsite. Berms around the active areas of the Island would help contain any runoff.

- v. The well bay can contain 2400 bbl of fluid. The tank area is surrounded by a 10 foot high wall which can contain 4800 bbl of liquid. The floor of the island is generally 10 feet or more below the sides of the Island except along the wharf area. The road does slope down from the wharf toward the floor of the island. The island itself can contain at least another 10,000 bbl of oil over and above that of the well bay area.

Because the wells are non-free flowing, spills from blowouts are not expected (see discussion under "O - Human Health"). A spill from the largest tank within the tank area (1500 bbl) would easily be contained in the surrounding containment area. A spill from the 2,000 bbl tank outside the tank containment area would flow to the well bay area.

The only other type of spill possible would be from a pipeline leak or rupture. The largest line is a four inch diameter line that collects the oil from the individual lines from the wells. This line is equipped with automatic shutdowns. The entire line all the way to shore only contains less than 50 bbl of oil. The production rate would be less than 2000 bbl/day and hence a spill that would go undetected for an hour would only result in an 83 bbl spill, plus possibly the contents within the pipeline.

- vi. Bush has an Oil Spill Contingency Plan on file with the State Lands Commission which addresses specific spill control measures for Rincon Island. This plan would be implemented in the event of a spill. Bush is a member of Clean Seas, Inc.

K. POPULATION AND HOUSING

No mitigation measures are proposed.

L. TRANSPORTATION/CIRCULATION

- i. In order to reduce the impact to the existing transportation system, left hand turns across Highway 101 traffic would not be performed during the project. All vehicles requiring to go north after exiting Rincon Island would make a right turn onto U. S. Highway 101 and drive south, exiting at the Seacliff Interchange, located about 1-1/2 miles south of Rincon Island. The vehicles would then cross U. S. 101 and enter it via the northbound Seacliff onramp. All vehicles approaching Rincon Island from the south would exit U. S. 101 at the Bates Road interchange, located about 2.5 miles north of Rincon Island. The vehicles would then cross U. S. 101 and enter it via the southbound

Bates onramp. Rincon Island may then be entered by a right turn off of U. S. 101. The interchanges discussed above are shown on Exhibit H.

- ii. Bush Oil Company workers usually carpool. Bush will require continuation of this practice and will shuttle workers from Bush's Rincon Field office to Rincon Island to minimize traffic on the Rincon Island causeway.

M. PUBLIC SERVICE UTILITIES

No mitigation measures are proposed.

N. ENERGY

No mitigation measures are proposed.

O. HUMAN HEALTH

No mitigation measures are proposed.

P. AESTHETICS

No mitigation measures are proposed.

Q. RECREATION

No mitigation measures are proposed.

R. ARCHAEOLOGICAL/HISTORICAL

No mitigation measures are proposed.

8. ORGANIZATIONS CONTACTED

Bush Oil Company, California District
State Lands Commission
Ventura County Air Pollution Control District
State of California, Department of Transportation
Ventura County Planning Department

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EXHIBIT "C"

BUSH OIL WORKOVER PROJECT

MITIGATION MONITORING AND REPORTING PLAN
(Section 21081.6, PRC)

Section 1

INTRODUCTION

This plan has been developed in conformance with the requirements of Section 21081.6 of the Public Resources Code and shall be known as the Mitigation Monitoring Plan (Plan) for the Bush Oil Workover Project which entails the workover of 21 existing oil and gas wells on Rincon Island and one at 5750 Pacific Coast Highway.

Section 2 provides a brief summary of the project. Section 3 describes each impact to be mitigated, each mitigation measure, and the monitoring requirements and scheduling of each implementation measure.

IMPLEMENTATION

Responsibilities

Bush Oil Company (the Applicant), its representative(s), or successors-in-interest, remain responsible for full implementation of all mitigation measures adopted within Applicant's project and described in the Negative Declaration.

The California State Lands Commission (SLC), as CEQA Lead Agency, through its Field Inspection units, shall be responsible for the administration of all provisions of this Plan. The Field Inspection units will ensure that complete monitoring reports are generated and that deficiencies or violations are promptly corrected.

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Reporting

Verification of Compliance and Non-Compliance Reports shall be prepared by Field Inspectors using standard SLC reporting procedures. Copies of the reports will be transmitted to Bush Oil. Progress toward completion of the required mitigation program, or deficiencies thereof, shall be reported to Bush at SLC prescribed intervals or upon detection of the lack of compliance.

COMPLIANCE

SLC Field Inspectors, as well as Staff engineers and Supervisors, will make monitoring inspections on a regular basis and at critical operation phases to ensure compliance with the Plan. The SLC will acknowledge the successful completion of a mitigation measure after receipt of the Lessee's report and confirmation by SLC Staff.

VIOLATIONS

If a report identifies a violation of the mitigation program, the SLC, immediately upon receipt of the report, shall:

1. notify Bush Oil or its designated representative by telephone and order immediate compliance;
2. prepare written notification to Bush Oil of the violation ordering compliance, and;
3. identify the need for a follow-up field inspection

If compliance is not achieved, SLC Field Inspectors may order that work be stopped until compliance is achieved and notification is given by the SLC that work may resume. The period of time of the stop-work-order will be that time required to assure compliance has been achieved. Work on the project may not be resumed until compliance is achieved.

Violations of an approved mitigation measure which are not discovered until after Project Completion will result in one or more of the following actions affecting Bush Oil:

1. written notification and demand by the SLC for correction,
2. issuance of an infraction citation;
3. filing for legal action,
4. cancellation of lease and action for indemnification for damages from breach or non-compliance with lease terms

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and provisions.

If a dispute arises concerning the implementation or success of a mitigation, the dispute may be referred to the Executive Officer and, if unresolved, to the Commission for legal action. In such a case, work on the project will be stopped until the dispute is resolved.

Failure to comply with all adopted mitigation measures will constitute a breach of the lease.

FEES

Direct costs for mitigation measure implementation shall be paid by Bush Oil.

Section 2

PROJECT DESCRIPTION

Bush Oil Company, lessee of State Oil and Gas Leases PRC 1466 and PRC 410, is planning a project to enhance production of oil and gas from the "A" sand reservoirs in the offshore Rincon area. The enhancement is planned by sidetracking and deepening 22 existing wells into the AH to AZ sands. The location of the project in the area offshore Punta Gorda in Ventura County is shown in Exhibit A.

The plan provides for sidetracking and deepening twenty-two specific wells. Twenty-one of the specific wells planned for deepening are located in Lease PRC 1466 on Rincon Island, which was constructed in 1958 and is located at the end of a 3000 foot long trestle extending southward from shore at Punta Gorda. Sidetracking and deepening of these wells into the AS sand are planned.

One of the specific wells is planned for sidetracking and deepening into Lease PRC 410 about one mile east of Rincon Island. Access to lease PRC 410 is made through an existing well on the Bush Oil Company property at 5750 West Pacific Coast Highway located north of Highway 101 and South of the old Rincon Highway between the Fire Station at the Seacliff off ramp and the underpass to the Mobil Piers. The well in Lease PRC 410 is planned for deepening into the AZ sands.

The general extent of redrilling will vary from about 1600 feet to 3200 feet reaching a maximum depth of about 4800 feet.

Section 3

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PROJECT IMPACTS AND INCORPORATED MITIGATION

1. Impact: Discharge of muds or cuttings

Project Modification: No ocean discharge of muds or cuttings will occur.

Cuttings and mud wastes will be disposed at an approved Class II-I or Class I dumpsite as a non-hazardous waste in accordance with appropriate regulatory requirements.

Monitoring: All State oil and gas leases contain conditions establishing lease activity control, reporting and inspection mechanisms. The State Lands Commission has field inspection and monitoring staff to monitor and enforce the lease provisions and other SLC rules and regulations. The SLC inspectors will review and verify receipt slips for wastes disposed of at appropriate disposal sites.

2. Impact: During the night operations, lighting will be necessary around the well pads. The nearest light sensitive receptors would be the residences and hotel located at Punta Gorda at least 3,000 feet from the project site.

Project Modification: The illumination of the workover activities at night will be limited by appropriate shielding and directing techniques to reduce reflection and glare.

Monitoring: SLC inspectors will verify the placement of appropriate light shielding and placement.

3. Impact: Potential impact to existing transportation system on Highway 101.

Project Modification: In order to reduce the impact to the existing transportation system, left hand turns across Highway 101 traffic will not occur during the project. Contractor vehicles requiring to go north after exiting Rincon Island will make a right turn onto U. S. Highway 101 and drive south, exiting at the Seacliff Interchange, located about 1-1/2 miles south of Rincon Island. The vehicles will then cross U. S. Highway 101 and enter it via the northbound Seacliff onramp. All vehicles approaching Rincon Island from the south will exit U. S. 101 at the Bates Road interchange, located about 2.5 miles north of Rincon Island. The vehicles will then cross U. S. 101 and enter it via the southbound Bates onramp. Rincon Island may then be entered by a right turn off of U. S. 101.

As an additional measure to control traffic on Highway 101, Bush Oil Company workers usually carpool, and Bush will require continuation of this practice and will shuttle workers

from Bush's Rincon Field to Rincon Island to minimize traffic on the Rincon Island causeway.

Monitoring: A SLC inspector will monitor traffic flow and shuttling of workers to the work site.

4. Impact: Upset conditions could result in an accidental release or drilling mud or crude oil.

Project Modification: The following measures have been incorporated into the Bush project to minimize effects of upset conditions.

- a. The project operation would employ state-of-the-art blowout prevention technology and mud monitoring equipment.
- b. All supervisory personnel will be blowout and well control certified.
- c. The well bay on Rincon Island can contain 2400 barrels of fluid, mud, or oil.
- d. Design of the Island is such that spilled mud drains into the well bay trough. There are cellars on either end of this trough from which the mud can be pumped to a steel separation tank to separate out any oily wastes. This mud can then be transferred to a vacuum truck for disposal at an approved dumpsite. Berms around the active areas of the Island would help contain any runoff.
- e. The well bay can contain 2400 bbl. of fluid. The tank area is surrounded by a 10 foot high wall which can contain 4800 bbl. of liquid, the floor of the island is generally 10 feet or more below the sides of the Island except along the wharf area. The road does slope down from the wharf toward the floor of the island. The island itself can contain at least another 10,000 bbl of oil over and above that of the well bay area.

Because the wells are non-free flowing, spills from blowouts are not expected. A spill from the largest tank within the tank area (1500 bbl) would easily be contained in the surrounding containment area. A spill from the 2000 bbl tank outside the tank containment area would flow to the well bay area.

The only other type of spill possible would be from

a pipeline leak or rupture. The largest line is a four inch diameter line that collects the oil from the individual lines from the wells. This line is equipped with automatic shutdowns. The entire line all the way to shore only contains less than 50 bbl of oil. The production rate would be less than 2000 bbl/day and hence a spill that would go undetected for an hour would only result in an 83 bbl spill, plus possibly the contents within the pipeline.

Monitoring: Bush Oil has filed with the State Lands Commission, an Oil Spill Contingency Plan which addresses specific spill control measures for Rincon Island. This plan will be implemented in the event of a spill. Bush is also a member of Clean Seas, Inc.

SLC inspectors will ensure that such Plan is implemented as provided in the event of an upset condition at Rincon Island.

5. Impact: The project which is exempt from regulation under Rule 23.D.5 of the Ventura County Air Pollution Control District, will emit 13.6 tons of NO x and 1.1 tons of Reactive Organic Compounds (ROC) during the life of the project.

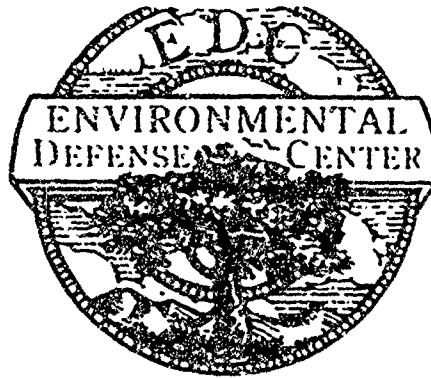
Voluntary Project Modification: Bush Oil Company Rincon Island leases presently operate under a Permit to Operate (PTO) issued by the Ventura County Air Pollution Control District. The current PTO is valid from January 1, 1991 to December 31, 1991 and is subject to annual renewal. In the PTO, condition number 3 specifies certain emission reductions (i.e., offsets) which have been certified for the facility. Bush has requested, and Ventura County APCD has agreed to amend the Rincon Island PTO so as to make the NO x and ROC offsets unavailable to Bush, i.e., consumed as offsets, for a period of time such that the one-time project emissions are offset at a ratio of 1.2 to 1, as required under Rule 26.1.B.2 and 26.2, Table 1, of the Ventura County APCD Rules and Regulations for non-exempt sources.

Monitoring: Bush proposes that the emission reductions be used for the duration of the project. The Ventura County APCD has agreed to amend the PTO to reflect use of these offsets for this project.

EXHIBIT "D"

BUSH OIL WORKOVER PROJECT

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July 10, 1991

State Lands Commission
1807 13 th Street
Sacramento, California 95814

RE: Adequacy of Bush Oil Co. Rework Project environmental review and public participation: Item 28, July 15, 1991 Agenda

Dear Commissioners:

This office represents the Citizens to Preserve the Ojai and the Environmental Coalition of Ventura County in matters affecting air quality in Ventura County.

We are appreciative of the State Lands Commission's sensitivity to environmental issues and its cognizance of the need for environmental protection. I am somewhat surprised by the superficiality of the air quality analysis for this project, particularly in light of the severity of Ventura County's air quality problems. I hope that by bringing this issue to your attention you will require amendment of the negative declaration to reflect the true air quality impacts and will then require adequate mitigation for this project's impacts.

I must preface my comments with the caveat that I have received very little information about this project. There was no public notice or circulation of this negative declaration to the environmental community in our area, and SLC staff has not been able to forward any information about this project other than the draft negative declaration. It is this negative declaration that I base these comments upon.

In my summary review of the proposed negative declaration in this matter, I have concluded that the document fails to identify and mitigate the adverse air quality impacts from this project. As such, approval of the project would constitute a prejudicial abuse of discretion and would be subject to reversal in court.

While SLC staff has been unable to forward the staff report in this matter, it is apparent from the negative declaration that approval would be ill-advised without mitigation of air quality impacts.

Ventura County has a severe air quality problem that will only be resolved by the elimination of every available source of air pollution. CPO recently settled federal court litigation with the United States Environmental Protection Agency. Citizens to Preserve the Ojai v. Environmental Protection Agency, et al., C.D. Cal. No. 88-00982 HLH (Sx). The basis of the complaint was that the Ventura County Air Pollution Control District had failed to promulgate rules and regulations sufficient to adequately protect Ventura County air quality. 42 U.S.C. § 7410 (c). In settling the lawsuit, EPA agreed to prepare a federal implementation

plan to address deficiencies in Ventura County's plans. Although the parties obligations under the lawsuit have been tolled pending the appeal of similar litigation, the fact remains that Ventura County air quality routinely violates the health based national ambient air quality standards, exposing Ventura County residents to unnecessary threats to human health. The only means for improving Ventura County air quality is to reduce the emissions of ozone precursors, NO_x, ROC and VOC.¹¹

Computer modelling performed by EPA discloses the conclusion that at least 40 % of Ventura County's NO_x and VOC inventory must be eliminated to demonstrate attainment of the national ambient air quality standard for ozone. See generally, 56 Federal Register 1754. Additional reductions in these pollutants is necessary to attain the more stringent state ozone standard.

It is very surprising that the negative declaration fails to address the significance of the project's emissions on these legal requirements. It is not surprising that the Ventura County Air Pollution Control District has no rule to regulate the diesel engines that are the source of many of the project's emissions: the Ventura County Air Pollution Control District's lax rules are principally responsible for the fact of Ventura County's nonattainment. The State Lands Commission must not rely on the absence of Ventura County rules for this particular source as authority for concluding that there is no adverse environmental impact nor that there are mitigation measures available to reduce or eliminate the adverse environmental impact.

The project promises to exacerbate Ventura County's air quality problem, and the negative declaration fails to adequately document that impact. The project's emission of over 10 tons of NO_x will contribute significantly to Ventura County ozone national and state ambient air quality standards violations. Congress has classified Ventura County as an "extreme area" with a new source review threshold of 10 tons per year. 42 U.S.C. §§ 7511; 5711a. While this classification is subject to modification and it is quite likely that Ventura County will ultimately be classified as a "Severe area", the Commission must be aware that the NO_x emissions alone from this project are very significant and will, most definitely, contribute to nonattainment in the region. This is a significant impact pursuant to CEQA. See Cal.Admin.Code, tit. 14, Section 15000, et seq.; Appendix G (x).

Further, the negative declaration fails fully to address project VOC or ROC emissions, even though diesel engines are well-documented sources of these pollutants and each contributes to ozone formation and violations.

In addition, the negative declaration fails to consider other project impacts to air quality, including emissions from project vehicle traffic, and increased fugitive emissions.

Lastly, there is no consideration of cumulative air quality impacts from the project. Increased production from these wells will cause increased refinery emissions and increased consumer emissions.

1. The formation of ozone in the lower atmosphere is a complex science, but it is well established that reductions in emissions of the principal ozone precursors, NO_x and Volatile and Reactive Organic Compounds (ROC and VOC) is necessary to reduce ambient ozone concentrations. See 56 Federal Register 1754, the Environmental Protection Agency's draft federal implementation plan for Ventura County.

I have been told by the "negotiator" for this item that air quality issues are not significant since the applicant has air pollution offsets that could be used to mitigate for air quality impacts. While banked offsets could be used to address Ventura County Air Pollution Control District requirements, if there were any, they cannot competently claim that the previous elimination of another source of air pollution will fully mitigate this project's air quality impacts without a careful and complete documentation of the nature of and type of the banked emissions, the source's location, establishment that those emissions reductions would not otherwise be required by a new air pollution rule since banking, etc. The negative declaration is intended to provide the decisionmakers with information to gauge the adverse environmental impact from a project, including the effectiveness of mitigation measures, and the proposed negative declaration does not. See generally Friends of "B" Street v. City of Hayward (1980) 106 Cal.App.3d 988, 165 Cal.Rptr. 514.

Further, the SLC did not confer with the California Air Resources Board, members of the environmental community, or the Santa Barbara Air Pollution Control District, even though state and federal air quality agencies consider Ventura County to transport air pollution to Santa Barbara County.

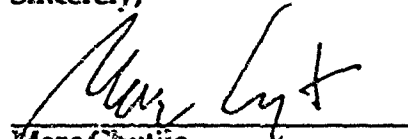
Consequently, it is hereby requested that the State Lands Commission take the following steps:

- 1) withhold final action on this item;
- 2) direct staff to prepare a full EIR for this project addressing air quality issues;
- 3) undertake full consultation with all affected and interested agencies and the local environmental community.

Please consider this letter also as a request for a continuance on this item. It is impractical to distribute the Commission's agenda one week prior to the hearing and not allow the distribution of staff reports or other substantive project information until immediately before the hearing. Enforcement of environmental laws require extensive public participation, and the process employed in this case inhibit, rather than encourage, public participation. It takes time to research and respond to similar proposals, yet the process prevents it. A longer public review period for consideration of agenda items is necessary, and greater distribution of environmental review documents must be undertaken.

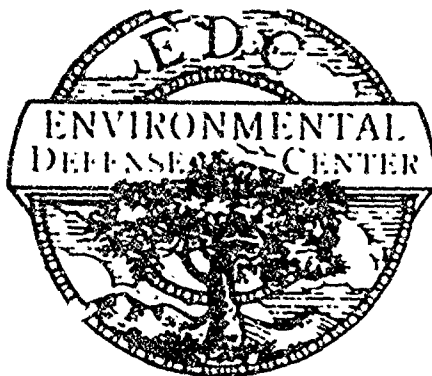
Thank you for your consideration of these comments.

Sincerely,



Marc Chylito
Chief Counsel
Environmental Defense Center

CC: Ventura County Board of Supervisors
Richard Baldwin, Ventura County Air Pollution Control District



July 12, 1991

State Lands Commission
1807 13th Street
Sacramento, California 95814

RE: Request for continuance of items # 28, 30, 32 and 33 on July 15, 1991 Agenda

Dear Commissioners:

This office represents numerous citizens' and environmental groups in Santa Barbara, Ventura and San Luis Obispo Counties in matters affecting the quality of the environment in this region.

I received a copy of the State Lands Commission agenda for July 15, 1991 on or about July 9, 1991. I reviewed its contents and contacted the appropriate staff persons to gain additional information regarding the above numbered items.

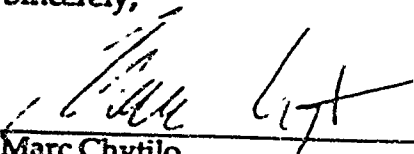
While I was able to speak to several staff people, none were able to send me the staff report or other technical information regarding each of the identified projects. I was able to obtain a copy of the Bush Oil Company negative declaration (item 28), but no additional written information, which I was told was undergoing legal review. No staff reports were delivered on Saturday, July 13, 1991, and thus there is no possible way for me to present meaningful public comment to the items in which I have interest.

While I understand that item 33 will be continued, I hereby request that the remaining items identified above also be continued until the environmental review documents and other technical information underlying these items is permitted full public review. The State Lands Commission's enabling authority mandates full public participation in the decisionmaking process. Public Resources Code § 6110 prohibits the Commission from making any specific project findings "until the commission has considered at a public hearing the written report of the [staff] officer and . . . any statements, arguments, or contentions which may be presented at the public meeting of the commission." I would like to offer argument and contentions based upon what I think may be happening with these particular items, however I cannot formulate such arguments, etc., without having first reviewed the report that I will be commenting upon. There may be no problem, however if Bush Oil is exemplary, the adverse air quality impacts that are so problematic in this region may not have been fully accounted for and mitigated, and thus, CEQA may not have been fully complied with. See my letter to the commission dated July 10, 1991 for additional detail on this item.

I will be available to respond to questions at the phone number listed below, but due to a tight budget and large caseload, I will not be present at your hearing on July 15, 1991. I trust that you will give these comments appropriate consideration.

State Lands Commission
Request for Continuance
July 12, 1991
Page 2

Sincerely,



Marc Chytilo
Chief Counsel
Environmental Defense Center

STATE LANDS COMMISSION

LEO T. McCARTHY, Lieutenant Governor
GRAY DAVIS, Controller
THOMAS W. HAYES, Director of Finance

EXECUTIVE OFFICE
1807 - 13th Street
Sacramento, CA 95814

CHARLES WARREN
Executive Officer

August 1, 1991

Mr. Marc Chytilo
Chief Counsel
Environmental Defense Center
906 Garden Street, Suite 2
Santa Barbara, CA 93101

Dear Mr. Chytilo:

Staff of the State Lands Commission take this opportunity to respond to your letters of July 10 and 12, 1991 regarding the proposed Bush Oil Workover Project in Ventura County. The project was originally scheduled for the July 15, 1991 State Lands Commission meeting. In light of the complexity of the air quality issues and regulations involved and the timing of your letters, staff requested that the item be deferred.

We provide the following comments as specific responses to the issues raised in your letters:

1. Circulation of the Negative Declaration and opportunities for comment:

The proposed Negative Declaration for the Bush Workover Project was circulated through the State Clearinghouse on March 11, 1991 for a thirty day review, which ended on April 11, 1991. Comments were received from Caltrans, Southern California Association of Governments, Regional Water Quality Control Board and the U. S. Army Corps of Engineers. None of these comments express concern with the project, as proposed.

The following agencies/organizations received copies of the proposed Negative Declaration for the Bush Workover Project:

- California Air Resources Board
- Santa Barbara County Air Pollution Control District
- Ventura County Air Pollution Control District
- Ventura County Environmental Resources Department
- Ventura County Planning Department
- Citizens to Preserve the Ojai
- Environmental Coalition of Ventura County

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August 1, 1991
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Comments were not received from any of the above organizations noted above (*), represented by the Environmental Defense Center.

In the three months since the close of the comment period, no additional letters of comment or concern have been received, with the exception of the letters from the Environmental Defense Center(EDC).

Public notice of the intent to adopt the document was also provided in the Los Angeles Times and the Ventura County Star-Free Press.

2. Air quality:

The proposed project consists of the rework of 22 existing wells, a process requiring 10 days per well, approximately 220 days altogether. This is a one-time project. There will be no increase in operational emissions after completion of the rework.

The rig used for the workover project is exempt from the permit requirements of the Ventura County Air Pollution Control District under its Rule 23.D.5. Ventura County is likely to be designated as a "severe" non-attainment area for ozone (O_3), in accordance with the Federal Clean Air Act, 42 CFR182(d) and (f). Under these provisions of the law, a project emitting over 25 tons per year of either oxides of nitrogen (NO_x) or reactive hydrocarbons is subject to New Source Review and would probably have to provide offsets for those emissions. Currently, the area is classified as "extreme" non-attainment for ozone, and the corresponding New Source Review thresholds are 10 tons per year.

Precursors to ozone, under both California and federal law, are NO_x and reactive organic compounds (ROC). ROC consists of volatile organic compounds (VOC) less methane (CH_4). Methane is not a reactive hydrocarbon, and is not regulated under either federal or California law. ROC is sometimes denoted "non-methane hydrocarbons" or "NMHC" in air regulations. In the EPA Compilation of Air Pollutant Emission Factors (AP-42), aldehydes, a ROC, is listed separately for diesel engines. AP-42 provides a factor for total exhaust hydrocarbons (less aldehydes). Speciation information, available from the California Air Resources Board, is then used to separate methane from the VOC to derive ROC. Project emission factors derived from EPA's AP-42, then, are "exhaust hydrocarbons" less methane, plus "aldehydes." These considerations are included in the attached Tables 3 and 3a.

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Mr. Marc Chytilo
August 1, 1991
Page Three

As may be seen from these tables, the proposed project will emit a total of 13.6 tons of NO_x and 1.1 ton of ROC over the project life. We have discussed these circumstances with both Santa Barbara and Ventura County Air Pollution Control Districts and Bush Oil. As a result of these discussions, Bush Oil proposes to offset the emissions of precursors of ozone, NO_x and ROC for the proposed project.

The Bush Oil Company Rincon Island leases presently operate under a Permit to Operate (PTO) issued by the Ventura County Air Pollution Control District. The current PTO is valid from January 1, 1991 to December 31, 1991, and is subject to annual renewal. A copy of the current PTO is attached hereto. In the PTO, condition number 3 specifies certain emission reductions (i.e., offsets) which have been certified for the facility. There are 7.94 tons per year of NO_x and 46.13 tons per year of ROC offsets at the facility available for use by Bush Oil. As previously stated, the project emissions are 13.6 tons of NO_x and 1.1 tons of ROC. Bush proposes that the Ventura County APCD amend the Rincon Island PTO so as to make the NO_x and ROC offsets unavailable to Bush, i.e., consumed as offsets, for a period of time such that the one-time project emissions are offset at a ratio of 1.2 to 1, as required under Rule 26.1.B.2 and 26.2, Table 1, of the Ventura County APCD Rules and Regulations. To effect this offset, the emissions reductions certified for the facility in the PTO would be used for:

$$\text{NO}_x: \frac{13.6 \text{ tons emitted} \times 1.2 \text{ (offset ratio)}}{7.94 \text{ tons/year available}} = 2.06 \text{ years}$$

$$\text{ROC: } \frac{1.1 \text{ tons emitted} \times 1.2 \text{ (offset ratio)}}{46/13 \text{ tons/year available}} = 0.036 \text{ years}$$

Bush proposes that the emission reductions be used for the length of time calculated above, or the duration of the proposed project, whichever is longer. The Ventura County APCD has agreed to amend the PTO in accordance with the above proposal.

3. Project Vehicle Traffic:

The project would require two truck trips per week and five commuter vehicle (automobile) trips per day. This project traffic represents about 0.0002 of the average daily traffic in the project vicinity on Route 101, and about 0.00015 of the average daily traffic in the peak month at the El Rincon Interchange near the project site. Emissions from mobile sources, i.e., autos, trucks, are regulated at the state level. As a result of the existing

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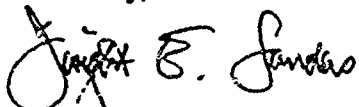
Vehicle Inspection and Maintenance program in California, virtually all vehicles may be presumed to be in compliance with applicable vehicle emission regulations. Emissions from this small number of project-related vehicles are, therefore, considered insignificant.

Lastly, None of the oil produced by Bush at Rincon Island is processed by any refinery in Ventura County, but is refined in the Los Angeles area. Operation of the refineries in the Los Angeles area is regulated by the South Coast Air Quality Management District. Each refinery in the Los Angeles refinery system must remain in compliance with its existing permits.

In consideration of the above, staff of the Commission is rescheduling the Bush Oil Workover Project for the next State Lands Commission meeting which is scheduled for August 12, 1991 in Sacramento. The item which will go before the Commission will also include a Mitigation Monitoring Plan which will ensure that the proposed offsets will mitigate air quality impacts in Ventura County.

We appreciate the comments from Environmental Defense Center regarding air quality, and believe that you will find this to be an innovative approach to the issue of air quality in Ventura County. If you have any additional comments or questions on this agenda item, please contact Mary Griggs at (916) 322-0354 by August 7, 1991.

Sincerely,



DWIGHT E. SANDERS, Chief
Department of Environment
and Planning Management

cc: Charles Warren, Executive Officer
James F. Trout, Assistant Executive Officer
Robert C. Hight, Chief Counsel
Jan Stevens, Office of the Attorney General
Ray Hatch, Bush Oil Company

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Ventura County Air Pollution Control District
800 South Victoria Ave Ventura, CA 93009
(805)654-2801

DRAFT PERMIT TO OPERATE
Number 0003

Valid January 1, 1991 to December 31, 1991

This Permit Has Been Issued To The Following:

Company Name / Address:

Bush Oil Company
5750 W. Pacific Coast Highway
Ventura, CA 93001

Facility Name / Address:

Bush Oil Company
Rincon Island Leases
Ventura, CA 93002

DRAFT

Permission Is Herby Granted To Operate The Following:

Rincon Island State Lease 1466:

- 1 - 300 bbl, 3-ring Storage Tank with Vapor Recovery.
- 2 - 1,000 bbl Storage Tanks (Nos. 1038 and 1039) with Vapor Recovery.
- 1 - 1,500 bbl Wash Tank with Vapor Recovery.
- 1 - 2,000 bbl Produced Water Tank with Vapor Recovery.
- 34 - Producing Oil Wells (Nos. 6, 8, 10, 17, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 32, 34, 40, 42, 45, 46, 47, 49, 50, 51, 53, 54, 57, 59, 61, 63, 64, 67 and 8-11); all are contained in a 15 ft. x 200 ft. open drilling collar
- 2 - 8 ft. x 8 ft. Sump Pits with Metal Grates

Hobson State, Whitten State and Hobson Lease:

- 6 - 500 bbl Crude Oil Storage Tanks (Nos. 1679, 1680, 1223, 1224, 1225 and 2045) with Vapor Recovery
- 2 - 750 bbl Wash Tanks with Vapor Recovery
- 1 - 500 bbl Wash Tank with Vapor Recovery
- 1 - 1000 bbl Produced Water Tank (No. 1678) without Vapor Recovery
- 1 - MATCO Heater Treater 1 MM BTU/Hr
- 22 - Oil Wells (Hobson State Lease Nos. 4, 5, 6, 7, 8, 9, 10, 11, 13, 15; Whitten State Lease Nos. 7, 8, 9, 11, 12, 13, 14, 15, 16, 20; Hobson Lease Nos. 5 and 6) Sump Area consisting of:
 - 1 - Pickup Pit, 8 ft. x 10 ft.

State PRC145 Lease:

- 1 - 1,500 bbl Wash Tank (No. 765) with Vapor Recovery
- 1 - 1,500 bbl Power Oil Tank (No. 764) with Vapor Recovery
- 3 - 1,000 bbl Storage Tanks (No. 1483, 1484, 1917) with Vapor Recovery
- 1 - 250 bbl Test Tank with Vapor Recovery
- 1 - Sump, 144 square feet surface area
- 1 - Water Heater, Parker, Model T-1460, 1.46 MMbtuH
- 13 - Kobe Wells (Nos. 1, 2, 3A, 4, 5, 6A, 7, 8, 9, 10, 11, 12, 16)

DRAFT

For use throughout all the leases:

- 3 - 500 bbl closed top portable tanks, equipped with sealed hatches and pressure-vacuum relief valves

This Permit Has Been Issued Subject To The Following Conditions:

1. Permitted Emissions:

	Tons/Year	Pounds/Hour
Reactive Organic Compounds	31.24	7.13
Nitrogen Oxides	0.39	0.15
Particulate Matter	0.02	<0.01
Sulfur Oxides	<0.01	<0.01
Carbon Monoxide	0.08	0.05

- 2. Permitted Emissions are based on the following limits. Prior to exceeding these limits, permittee shall apply for a change in permitted emissions.

Throughput limits:

Rincon Island State Lease 1466

Tank #1035 (1,000 bbl)	191.6 MBOPY
Tank #1039 (1,000 bbl)	21.9 MBOPY
Tank (300 bbl)	3.6 MBOPY

Hobson State, Whitten State and Hobson Lease

Tank 2 at 500 bbl	37.6 MBOPY each
Tank 2 at 500 bbl	10.5 MBOPY each
Tank 2 at 500 bbl	2.0 MBOPY each
Tank 1 at 500 bbl	146.0 MBOPY

State PRC 145 Lease

Tank #764 (1500 bbl)	595.0 MBOPY
Tank #1483, 1484, and 1917 (1,000 bbl)	81.0 MBOPY each
Tank (250 bbl)	8.0 MBOPY

Fuel Consumption Limits:

NATCO Heater Treater (1 MBtuH)	3.7 MFCFY
Parker Water Heater (1.46 MBtuH)	4.0 MFCFY

- 3. The following emission reductions have been certified for this facility:

Pollutant (Tons Per Year)

ROC	NOx	PM	SOx	CO
46.13	7.94	0.18	0.01	33.26

Future modifications, changes, or permitted emissions increases at this facility may be offset using these Certified Emission Reductions (see District Rule 26 for details). These reductions may only be used to

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offset emission increases at this facility and may not be sold, granted, or leased for use as offsets at or for any other stationary source.

4. The three portable tanks are to be used only during facilities maintenance for temporary storage of petroleum and reactive organic compound fluids. The portable tanks shall not be used to increase the storage capacity of any tank battery.
5. When in use, the portable tanks shall be connected to the vapor recovery system if they are at a tank battery equipped with vapor recovery. Notwithstanding the proximity to a tank battery, the tanks shall be connected to a vapor recovery system if they are at a site for more than sixty days.
6. All storage tanks, except those noted to be specifically exempt from vapor recovery, are to be controlled by a vapor recovery system which is to be maintained and operated properly at all times.
7. All storage tanks noted to be without vapor recovery shall not store or hold any crude oil or other organic liquid with a true vapor pressure of 0.5 psia, or greater.
8. All recovered gas shall be routed to a gas pipeline.
9. Permittee shall maintain records of monthly tank throughputs, and monthly natural gas consumption for the equipment listed in condition number two. These records shall be maintained for at least two years and shall be made available to APCD personnel upon request.

Within ten days after receipt of this permit, the applicant may petition the Hearing Board to review any condition that has been modified or added to the permit (Rule 22).

This permit, or a copy, shall be posted reasonably close to subject equipment and shall be readily accessible to inspection personnel from the Air Pollution Control District (Rule 19).

This permit is not transferable from one location to another unless the equipment is specifically listed as being portable (Rule 20).

In reliance upon the statement of the applicant that the operation of the equipment described herein shall meet the requirements as specified in the Rules and Regulations of the Air Pollution Control District, permission is hereby granted to operate; provided, however, the permission granted hereby shall not be construed to permit said equipment to operate in violation of any applicable State or Federal emission standard or Rules and Regulations of the District.

VCAPCD Permit to Operate Number 0003
Issued To Bush Oil Company
Valid January 1, 1991 to December 31, 1991

Richard H. Baldwin
Air Pollution Control Officer

by:

Kari E. Krause, Manager
Engineering Section

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TABLE 3
 DRILL RIG ENGINE EMISSIONS^a

POLLUTANT	EMISSION FACTOR ^b (g/hr-hr)	lb/hr	tons/well	TOTAL TONS (22 wells)
Nitrogen Oxides	14	7.6	0.48	10.6
Sulfur Dioxide	0.93	0.5	0.03	0.7
Carbon Monoxide	3.03	1.6	0.10	2.2
Particulate Matter	1.0	0.5	0.03	0.7
Reactive Hydrocarbons ^c	1.2	0.6	0.03	0.6

- a. Emissions based on a 350 hp engine operating at an average load of 70 percent for 128 hours per well.
- b. Emission factors are from the EPA publication - Compilation of Air Pollutant Emission Factors (AP-42, Table 3.3-1).
- c. Includes exhaust hydrocarbons and aldehydes, less methane in accordance with ARB (1989a).

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TABLE 3a
 MUD PUMP ENGINE EMISSIONS^a

<u>POLLUTANT</u>	<u>EMISSION FACTOR^b (g/hr-hp)</u>	<u>lb/hr</u>	<u>tons/well</u>	<u>TOTAL TONS (22 wells)</u>
Nitrogen Oxides	14	8.6	0.14	3.0
Sulfur Dioxide	0.93	0.6	0.01	0.2
Carbon Monoxide	3.03	1.9	0.03	0.7
Particulate Matter	1.0	0.6	0.01	0.2
Reactive Hydrocarbons ^c	1.2	0.7	0.01	0.2

- a. Emissions based on a 400 hp engine operating at an average load of 70 percent for 32 hours per well (25% of workover rig operating time).
- b. Emission factors are from the EPA publication - Compilation of Air Pollutant Emission Factors (AP-42, Table 3.3-1).
- c. Includes exhaust hydrocarbons and aldehydes, less methane in accordance with ARE (1989a).

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